

Haley & Aldrich, Inc.  
 1956 Webster Street  
 Suite 450  
 Oakland, CA 94612

Tel: 510.879.4544  
 Fax: 510.251.1304  
 HaleyAldrich.com



31 January 2014  
 File No. 39751-002

California Regional Water Quality Control Board  
 San Francisco Bay Region  
 1515 Clay Street, Suite 1400  
 Oakland, California 94612

Attention: Mr. Max Shahbazian, PG

Subject: Fourth Five-Year Review Report  
 Former 901/902 Thompson Place  
 Sunnyvale, California

Dear Mr. Shahbazian:

Haley & Aldrich, Inc., on behalf of Advanced Micro Devices, Inc. (AMD), is pleased to submit this Fourth Five-Year Review Report for the former AMD facility located at 901/902 Thompson Place in Sunnyvale, California. This five-year report has been prepared in accordance with the requirements of Site Cleanup Order 91-102 issued by the California Regional Water Quality Control Board – San Francisco Bay Region.

Please contact either of the undersigned if you have any questions, or require additional information.

Sincerely yours,  
 HALEY & ALDRICH, INC.

Michael Calhoun, PG, CHG  
 Senior Technical Specialist

Peter Bennett, PG, CHG  
 Lead Hydrogeologist and Vice President

Enclosures

c: United States Environmental Protection Agency; Attn: Melanie Morash  
 Advanced Micro Devices, Inc.; Attn: Do Cao  
 Advanced Micro Devices, Inc.; Attn: Brett Stringer

**FOURTH FIVE-YEAR REVIEW REPORT  
FORMER 901/902 THOMPSON PLACE  
SUNNYVALE, CALIFORNIA**

by

**Haley & Aldrich, Inc.  
Oakland, California**

for

**Advanced Micro Devices, Inc.  
Sunnyvale, California**

**File No. 39751-002  
31 January 2014**

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## **1. INTRODUCTION**

This report, prepared by Haley & Aldrich, Inc. (Haley & Aldrich) on behalf of Advanced Micro Devices, Inc. (AMD) presents the Fourth Five-Year Review for the former AMD facility at 901/902 Thompson Place, located in Sunnyvale, California (the Site; Figure 1). This Five-Year Review Report is submitted in response to Task 7 of Site Cleanup Requirements Order No. 91-102, issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board). The three previous Five-Year Review Reports for the Site were submitted to the Water Board on behalf of AMD in June 1996, June 2001, and December 2008. The Water Board, on behalf of the United States Environmental Protection Agency, Region 9, submitted its previous 5-Year CERCLA Review for the Site on September 30, 2009 (EPA 5-Year Review; EPA, 2009); the review was based on AMD's Third Five-Year Review Report, submitted in 2008 (AMEC, 2008).

The period of review for this Third Five-Year Review Report encompasses data collected at the Site from January 2009 through December 2013 (approximately 5 years).

### **1.1 Regulatory Orders**

*Site Cleanup Requirements Order Number 91-102* (the Order) was issued on June 19, 1991, by the Water Board. The Order specifies the Site cleanup goals and designates groundwater extraction and treatment as the final groundwater remedial action for the Site. Treated groundwater was discharged to an on-Site storm sewer under Water Board Order No. 99-051 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAG912003. Groundwater discharge ended on December 17, 2002, when operation of the groundwater extraction and treatment system (GETS) was shut down with Water Board approval to accommodate a pilot test of in situ bioremediation (ISB) system. Based on the success of the pilot test, implementation of a Full Scale ISB program was initiated in 2005 with Water Board approval. Under this program, extracted groundwater was treated with carbon filtration before adding carbohydrate as a substrate for ISB, followed by re-injection to form a groundwater treatment zone.

### **1.2 Purpose of This Report**

The purpose of the 5-Year Review is to determine whether the remedy at the Site is protective of human health and the environment (EPA, 2009). This Fourth Five-Year Review Report assesses the effectiveness and efficiency of the remediation program over the past five years, and addresses issues raised in the last EPA 5-Year Review.

### **1.3 Issues Raised in the 2009 EPA 5-Year Review**

The three issues and recommended follow-up actions presented in the 2009 EPA 5-Year Review (EPA, 2009) were as follows:

**Issue #1:** ISB has shown greater potential towards achieving site cleanup standards in a reasonable timeframe than the GETS.

**Recommendation and Follow-up Action:** AMD should continue to evaluate the progress of groundwater treatment and the ISB program. The ROD and final SCR will need to be amended to reflect the remedy change from groundwater extraction to ISB.

**Issue #2:** If use at the building changes, or a new building is constructed, then there may be a potential for vapor intrusion until the groundwater remedy is successful.

**Recommendation and Follow-up Action:** AMD will be required to conduct soil gas sampling to further assess the potential vapor intrusion pathway. If the soil gas sampling results indicate a potential vapor intrusion concern (i.e., soil gas concentrations greater than soil gas ESLs), AMD will be required to conduct indoor air sampling.

**Issue #3:** The existing restrictive covenant is not consistent with current state law (California Civil Code section 1471) which establishes the framework for environmental covenants in California.

**Recommendation and Follow-up Action:** A restrictive covenant should be recorded for the Site that is consistent with current California law.

AMD has implemented the three recommended Follow-Up Actions described above. The tasks implemented by AMD to address these issues are as follows:

Issue #1 – In order to assess and document the progress of groundwater treatment and the ISB program and support an amendment to the Record of Decision (ROD), AMD submitted a Focused Feasibility Study (FFS) to the EPA in May 2011 (AMEC, 2011), and revised and resubmitted the FFS in September 2013 (Haley & Aldrich, 2013b). The FFS recommends that the ROD be amended to replace groundwater extraction and treatment with ISB and monitored natural attenuation (MNA) as the final remedy for groundwater remediation. The revised FFS is currently under review by the EPA.

Issue #2 – In discussions with the EPA and Water Board, it was recommended that AMD conduct indoor air testing as opposed to soil vapor sampling for evaluating vapor intrusion. To address the potential for vapor intrusion at the Site, AMEC conducted an indoor air investigation in 2013 at the request of the Water Board (Water Board, 2013). Indoor air samples were collected in the on-Site self-storage facility under conservative conditions with the heating, ventilation and air conditioning (HVAC) system off. The samples were analyzed for all of the Site chemicals of concern (COCs). The results of the vapor intrusion evaluation indicated that even under more conservative Site conditions, indoor air quality was not impacted by COCs above risk-based screening levels with the exception of 1,4-dichlorobenzene, which was attributed to materials stored in the building, not vapor intrusion from groundwater (AMEC, 2013).

Issue #3 – AMD recorded a restrictive covenant in 2005 (a copy is included in Appendix C) with the Water Board’s approval. The covenant refers to Civil Code Section 1471, and includes a covenantee (AMD). AMD no longer owns the Site property, and does not have the legal right to record a new restrictive covenant on the Site property. However, the Water Board may have the authority to require a new covenant pursuant to the Prospective Purchaser Agreement that the Water Board signed for the benefit of the current owner. In compliance with the requirements of the last Five-Year Review, AMD prepared a revised covenant for the agencies’ review in 2012. The Water Board and EPA are currently reviewing the draft covenant.

## **2. SITE BACKGROUND**

The Site comprises approximately three acres of relatively flat land, at an average elevation of approximately 48 feet above sea level, approximately 4 miles south of the southern end of San Francisco Bay. Neighboring properties are used for light industrial and commercial purposes.

Two low-rise buildings, connected by a hallway, previously existed at the Site (formerly 901 and 902 Thompson Place; Figure 2). The property was sold to Summit Commercial Properties (Summit) and redeveloped in 2007. The 901 and 902 buildings were razed and a single three story building (875 East Arques Avenue; Figure 2) was constructed over the footprints of the previous buildings.

A network of 21 wells are monitored for groundwater quality on an annual basis. A network of 13 wells located in the ISB area are monitored on a quarterly basis to evaluate the performance of the ISB system. A number of former AMD groundwater extraction wells, and many other non-AMD monitoring wells exist in the area immediately surrounding the Site. Well locations are included on Figure 2. A Site plan focusing on the ISB program area is shown on Figure 3.

### **2.1 Site History and Chemical Use**

A chronology for the site is presented in Table I. AMD operated a facility to design and fabricate semiconductor devices between 1969 and 1992 (Arcadis, 2001). Two below-ground acid neutralization system (ANS) tank vaults were located at the northern and southern ends of the 901 and 902 Thompson place buildings, respectively (Arcadis, 2001). Both of the ANS tanks were constructed of coated concrete, had capacities of 2,000 gallons or less (Arcadis, 2001) and were used to contain acidic industrial wastewater that was neutralized by adding caustics before discharging to the sanitary sewer (Parsons ES, 1996).

Chemicals historically used by AMD for semiconductor fabrication at the site included solvents and corrosives (Engineering Science, 1988). Records of chemical use prior to 1980 are not available; however, it has been inferred by others that TCE was used on-Site between 1969 and 1979 (Engineering Science, 1988). The primary on-Site source of COCs appears to have been leakage through cracks in the ANS tanks that developed over time, or transport through the tanks' concrete walls (Engineering Science, 1988). The two ANS tanks were removed between 1983 and 1984, and replaced by two sets of three underground storage tanks (USTs) and associated vaulted containment systems (Arcadis, 2001).

Since 1980, the majority of the solvent waste generated on-Site was collected and stored in an above-ground storage tank (AST; Arcadis, 2001). Hazardous waste materials were containerized in 55-gallon drums in a hazardous material storage area.

The buildings were vacated by AMD in 1992 (Engineering Science, 1992) and remained vacant until the property was sold to Summit and redeveloped in 2007.

### **2.2 Nearby Sites**

Three nearby sites where releases of similar COCs have impacted groundwater are: 1) the former TRW Microwave site at 825 Stewart Drive; 2) the Philips Semiconductors site at 811 East Arques; and 3) the former AMD 915 DeGuigne Drive site. “The Companies Offsite Operable Unit” (OOU) extends north

of the Philips, TRW and 901/902 Thompson Sites. This area was mapped in the 1980s as a single commingled VOC plume composed chiefly of dissolved TCE; subsequent investigations were performed in the 1990's that improved the delineation of groundwater in this area indicate that the 901/902 Thompson Site is not likely to be a source for the TCE OOU groundwater plume (EFW, 1997 and 1998).

Another area of regional COC contamination originating south of the 901/902 Thompson Place Site, and extending east and north of the Site is the Mohawk plume, composed predominantly of cDCE (The Source Group, 2005). This plume is affecting groundwater on the easternmost portion of the Site, in the vicinity of wells 14-S and 17-S, which were previously monitored by Mohawk (Figure 2; The Source Group, 2005).

### **2.3 Hydrogeologic Conditions**

The Site is located in the central portion of Santa Clara Valley of the Coast Range physiographic province, an area characterized by north-south trending valleys and mountains. The Site is located within the San Jose Subarea of the South Bay Groundwater Basin. This area is characterized by a thick alluvial sequence underlain by sediments of the Santa Clara Formation (DWR, 1967). The alluvium generally is considered to be water-bearing, with coarse-grained alluvial deposits, representing ancestral stream channels and levee deposits, conveying groundwater from the forebay regions south and west of the site near the Santa Cruz Mountains, towards San Francisco Bay (Holley et al., 1979). This depositional environment has resulted in a high degree of heterogeneity with respect to hydrogeologic conditions beneath the site.

The site hydrostratigraphy is described by Engineering Science (1986) as a sequence of coarse-grained sediments separated primarily by silty clay. From shallow to deep, the primary hydrostratigraphic zones are described as follows:

1. the A-zone, an approximately 5-feet thick relatively continuous sandy layer typically encountered between 7 to 20 feet below ground surface (bgs). The direction of the lateral hydraulic gradient generally is north towards San Francisco Bay;
2. the B1-zone, an approximately 3 feet-thick, discontinuous, lenticular, sand and gravel unit typically encountered between 22 to 40 feet bgs;
3. the B2-zone, an approximately 4-feet-thick discontinuous sequence of sand and gravel lenses typically encountered between 45 to 65 feet bgs; and
4. the B3-zone, a system of two sandy layers approximately 1 and 4-feet thick, respectively, that is encountered between approximately 70 and 80 feet bgs.

The depth intervals designated for each of the zones are not consistent among many of the early reports on Site hydrogeology; different interpretations of depth intervals for various zones likely occurred because of the complex nature of the alluvial system beneath the Site, in which sand zones comprise elongated, channel-type deposits that can occur at various depths and widths, with a meandering three-dimensional configuration, rather than a series of horizontal, continuous layers. Nonetheless, A-zone wells are generally screened from 10 to 25 feet bgs; B1-zone wells are generally screened from 25 to 45 feet bgs; B2-zone wells are generally screened from 45 to 55 feet bgs; and the one B3-zone well (35-DDD) is screened from 70 to 80 feet bgs (Engineering Science, 1982).

The depth of the uppermost groundwater surface typically is encountered at approximately 10 feet bgs, and generally occurs under confined conditions. Upward vertical hydraulic gradient values were calculated between the three zones in 2013 (results to be submitted in the Annual Groundwater Monitoring Report, due January 2014), although downward vertical hydraulic gradient values have been reported at some locations during previous monitoring events (e.g., Geomatrix, 2005a). The horizontal hydraulic gradient is generally to the north – northeast, towards the Bay. This is consistent with the regional groundwater direction under natural conditions (USEPA, 1991).

## **2.4 Distribution of COCs in Groundwater**

The major COCs reported in groundwater samples above cleanup goals established in the Order are TCE and cDCE, both of which have been present in most groundwater samples from the A-, B1-, and B2-zone wells, but rarely in the B3-zone wells, likely because of the upward gradient from the B3- to the B2-zone. Vinyl chloride (VC) is also detected in groundwater samples collected from the ISB treatment area (VC is an interim breakdown product of TCE and cDCE as it degrades to ethene).

The concentration of these COCs detected in the most recent groundwater monitoring event conducted in October 2013 are generally consistent with a long-term decreasing trend, which was accelerated by the ISB program (AMEC, 2008). The distribution of COCs in groundwater at the Site is described in greater detail in the Sections below.

Historical monitoring results for wells included in annual groundwater monitoring are summarized in Appendix A; historical results for wells sampled as part of ISB performance monitoring are included in Appendix B.

### **2.4.1 Concentrations in the ISB Treatment Area**

In the A zone, the TCE concentrations reported in 2013 groundwater samples ranged from non-detect (<5 µg/L in several wells) to 37 µg/L (well 23-S); cDCE concentrations ranged from non-detect (<0.7 µg/L in X2A) to 130 µg/L (23-S); and VC ranged from 1.3 µg/L (DW-2) to 140 µg/L (X2A). In the B1 zone, concentrations of TCE ranged from non-detect (<0.5 µg/L at 28-D) to 280 µg/L (23-D); concentrations of cDCE ranged from 0.6 µg/L (DW-1) to 6,500 µg/L (PMW-2-1); and VC ranged from non-detect (<1.7 µg/L at 23-D) to 2,100 µg/L (PMW-2-1). The concentrations detected in the B1 zone are generally higher than those observed in the A zone. For the B2 zone monitoring well PMW-2-3 in the ISB treatment area, concentrations were 210 µg/L for TCE, 110 µg/L for cDCE, and 9.6 µg/L for VC during the last sampling event. These levels represent or are near historical low concentrations, consistent with a decreasing trend in concentrations observed since 2005.

The elevated cDCE concentrations found at some wells coincides with generally low total organic carbon (TOC) concentrations (Appendix B), suggesting that insufficient substrate leads to incomplete cDCE transformation. Elevated concentrations of VC were found in some ISB wells also, also indicating that additional substrate is required to support complete transformation of VC to ethene at some locations.

A summary of the changes in concentration of TCE, cDCE, and VC during the reporting period is shown below:

|                            | TCE<br>(2009) | TCE<br>(2013) | cDCE<br>(2009) | cDCE<br>(2013) | VC<br>(2009) | VC<br>(2013) |
|----------------------------|---------------|---------------|----------------|----------------|--------------|--------------|
| Max ( $\mu\text{g/L}$ )    | 260           | 280           | 5,600          | 6,500          | 1,500        | 2,100        |
| Median ( $\mu\text{g/L}$ ) | 6.5           | 5.9           | 50             | 6.0            | 33.5         | 10.3         |
| No. Wells Exceeding MCL    | 10            | 9             | 15             | 9              | 17           | 15           |

#### 2.4.2 Concentrations in the Area Upgradient of the ISB Treatment Area

The on-Site monitoring wells upgradient of the ISB treatment area consist of the following: 15-S, 27-S, 27-D, 27-DD, 29-S, 29-D, 52-D, and 53-D. In groundwater samples collected during the 2013 annual groundwater monitoring event, concentrations of TCE ranged from 7.0 to 230  $\mu\text{g/L}$  in the A zone; 6.9 to 88  $\mu\text{g/L}$  in the B1 zone; and 37  $\mu\text{g/L}$  in the B2 zone (Appendix A). The concentrations of cDCE ranged from 6.1 to 110  $\mu\text{g/L}$  in the A zone; non-detect (<1.0  $\mu\text{g/L}$ ) in the B1 zone; and 5.8  $\mu\text{g/L}$  in the B2 zone. VC was detected in only one upgradient monitoring well (A-Zone well 27-S, at a concentration of 2.7  $\mu\text{g/L}$ ). The concentration of TCE in the samples collected from the upgradient wells is generally greater than cDCE; the concentrations of cDCE remained low (close to or below the cleanup goal of 6  $\mu\text{g/L}$ ) in most of the upgradient wells. It is noted that the TCE and cDCE concentrations observed at the well cluster of 27-S, 27-D, and 27-DD are significantly higher than those at other upgradient wells. These wells are likely affected by off-Site upgradient non-AMD sources (AMEC, 2013).

A summary of the changes in concentration of TCE, cDCE, and VC during the reporting period is shown below:

|                            | TCE<br>(2009) | TCE<br>(2013) | cDCE<br>(2009) | cDCE<br>(2013) | VC<br>(2009) | VC<br>(2013) |
|----------------------------|---------------|---------------|----------------|----------------|--------------|--------------|
| Max ( $\mu\text{g/L}$ )    | 330           | 230           | 52             | 110            | Non-detect   | 2.7          |
| Median ( $\mu\text{g/L}$ ) | 56            | 30            | 2.2            | 1.5            | Non-detect   | Non-detect   |
| No. Wells Exceeding MCL    | 8             | 8             | 3              | 2              | 0            | 1            |

#### 2.4.3 Concentrations in Downgradient, Off-Site Monitoring Wells

For downgradient off-Site wells (36-S, 36-D, 36-DD, and 37-S), TCE ranged from 74 to 95  $\mu\text{g/L}$  in A-zone wells 36-S and 37-S, and cDCE ranged from 1.6 to 8.1  $\mu\text{g/L}$ . For B1-Zone well 36-D, TCE and cDCE were detected at 38 and 28  $\mu\text{g/L}$ , respectively. For B2-Zone well 36-DD, TCE was not detected, and cDCE was detected at 11  $\mu\text{g/L}$ . VC was detected in the B2-Zone well 36-DD, but at a concentration below 2  $\mu\text{g/L}$ . A summary is provided below:

|                            | TCE<br>(2009) | TCE<br>(2013) | cDCE<br>(2009) | cDCE<br>(2013) | VC<br>(2009) | VC<br>(2013) |
|----------------------------|---------------|---------------|----------------|----------------|--------------|--------------|
| Max ( $\mu\text{g/L}$ )    | 91            | 95            | 40             | 28             | 2.5          | 1.3          |
| Median ( $\mu\text{g/L}$ ) | 49.5          | 56            | 22.2           | 9.6            | Non-detect   | Non-detect   |
| No. Wells Exceeding MCL    | 3             | 3             | 3              | 3              | 1            | 1            |

#### **2.4.4 Concentrations in the B3 Zone**

Well 35-DDD has been used to monitor the COC concentrations in the B3 zone since 1985. No COCs were detected from the groundwater sample collected from this well in 2013. It is likely that the upward groundwater gradient between the B3 and B2 zones minimizes downward spread of COCs.

#### **2.5 Current Remedial Alternative**

The ROD specifies groundwater extraction and treatment as the remedial alternative for the site. The GETS began operating in 1983 and continued through 2002, when it was discontinued with Water Board approval to allow for the ISB pilot test. The system was comprised of eight extraction wells (DW-1 through DW-8) which pumped water from the A-, B1-, and B2-zones to the GETS, where COCs were removed from the extracted water by air-stripping prior to permitted discharge to the storm sewer or onsite re-use. Historical groundwater extraction flow rates for the eight wells was approximately 27 gallons per minute (gpm) over the previous review period when the system was operational (Arcadis, 2002, Geomatrix, 2003). The GETS was not operating during this review period; the ISB system in its current active configuration includes ex situ groundwater treatment by activated carbon adsorption prior to re-injection of treated groundwater augmented with carbohydrate.

### **3. PROGRESS SINCE 2008 REVIEW**

The work performed over the review period (2009 through 2013) includes groundwater monitoring, ISB system operation and performance monitoring, a vapor intrusion evaluation, and preparation and submittal of the FFS recommending a change to the ROD specifying ISB and MNA as the final remedy. These activities are further discussed below. As a result of this work, additional progress has been made cleaning up groundwater through operation of the ISB system, and an the FFS was submitted to support a change in remedy to ISB and MNA. In addition, the indoor air evaluation confirmed that indoor air quality is not impacted by migration of Site COCs from groundwater to indoor air.

#### **3.1 Groundwater Monitoring Program**

Groundwater monitoring activities include measuring depth to water and collecting groundwater samples from site monitoring wells on an annual basis, in accordance with the revised sampling plan approved by the Water Board (Geomatrix, 2007). The most recent monitoring event was conducted in October 2013, and the results will be reported in the 2013 Annual Groundwater Monitoring Report to be submitted on January 31, 2014, by Haley & Aldrich on behalf of AMD. Monitoring well locations are shown on Figure 2.

Table 2 summarizes the results from each year of monitoring between 2009 and 2013. Based on the analytical results for groundwater samples collected from monitoring wells, the monitoring program during this review period has shown the following:

- Water levels measured in site monitoring wells remained generally stable throughout the review period, with the maximum and minimum elevations for each year varying by less than one foot in the A and B1 Zones, and less than three feet in the B2 and B3 Zones.
- Interpreted horizontal hydraulic gradient directions generally have been towards the north to northeast in the A, B1, and B2 Zones;
- The number of wells in all four water-bearing zones where COC concentrations exceed cleanup goals established in the Order has ranged from a minimum of 19 wells (in 2011) to a maximum of 20 wells (all other years) during this reporting period.
- For wells upgradient of the former Site source area, the maximum total VOC concentrations decreased from 411 to 361  $\mu\text{g}/\text{L}$ ; and for off-site, downgradient wells, maximum total VOC concentrations remained fairly constant, (95  $\mu\text{g}/\text{L}$  in 2009 and 98  $\mu\text{g}/\text{L}$  in 2013). Currently, concentrations of total VOCs detected in wells monitoring upgradient, off-site sources are comparable to or greater than total VOCs detected in wells downgradient of the ISB treatment area and the Site.
- Maximum TCE concentrations have decreased over the review period from 330 to 230 micrograms per liter ( $\mu\text{g}/\text{L}$ ) in A-Zone wells, but have increased from 180 to 280  $\mu\text{g}/\text{L}$  in B1-Zone wells, and from 94 to 170  $\mu\text{g}/\text{L}$  in B2-Zone wells. As shallow (A-Zone) TCE concentrations decrease, the risk of vapor intrusion risk from TCE in groundwater continues to decrease.

- Maximum cDCE concentrations have decreased over the review period from 200 to 130 µg/L in A-Zone wells, from 350 to 28 µg/L in B1-Zone wells, and from 84 to 11 µg/L for B2-Zone wells.

### **3.2 ISB System Operation and Performance Monitoring**

As discussed in previous sections, a full-scale ISB system was operated between 2005 and 2008 to expedite groundwater cleanup in the vicinity of the former 901 Thompson Place ANS. Operation of the system is described in detail in the previous 5-Year Review (AMEC, 2008). Preliminary results indicated that *in situ* reduction of TCE, cDCE, and VC was occurring in the treatment zone groundwater. Cumulative TCE, cDCE, and VC concentrations have greatly decreased at most monitoring locations (and by greater than 90% at some locations). Complete transformation of TCE, cDCE, and VC to ethene is occurring throughout the A-Zone and in most B1-Zone wells. The plan to expedite groundwater cleanup through full-scale ISB appears to have been successful so far.

For the current reporting period of 2009 through 2013, the ISB system was not operated in 2009 and 2010. During this time in which the ISB system was not operating, reduction of COCs in the treatment zone continued because of the excess carbohydrate that had been introduced to the treatment zone while the system was running. Performance monitoring of 13 ISB monitoring wells continued while the system was not operating to assess ongoing, passive destruction of COCs.

By 2011, performance monitoring results indicated that while intrinsic bioremediation was still occurring, higher concentrations of COCs were observed in certain wells where total organic carbon (TOC) was depleted, and the rate of ISB processes may not have been sufficient to further reduce COC concentrations (AMEC, 2012). Therefore carbohydrate addition and groundwater circulation were resumed on a limited basis, between October 2011 and February 2012, and again between November 2012 and February 2013. During these two periods, approximately 348 pounds of carbohydrate substrate (molasses) were injected into the A and B1 Zones, and approximately 320,000 gallons of groundwater were extracted, treated with carbon filtration, and added back to the subsurface.

Performance monitoring conducted during and after the temporary ISB system restart indicated a decrease in COC concentrations (and a corresponding increase in the concentrations of environmentally benign ethene and ethane) where TOC concentrations had increased (Haley & Aldrich, 2013a). However, the ISB system had limited ability to deliver the carbohydrate substrate to some wells, potentially due to (1) low flow rates in the injection/extraction wells caused by biofouling, and (2) the heterogeneous nature of the A and B1 Zones beneath the Site. In August 2013 the injection and extraction wells were redeveloped to improve flow rates in the future. Haley & Aldrich anticipates that the ISB system will be restarted again in the first quarter of 2014 with sodium lactate used as the substrate, as described in the revised FFS (Haley & Aldrich, 2013b).

Performance monitoring results through the fourth quarter of 2013 will be reported in the upcoming 2013 Annual Groundwater Monitoring Report, to be submitted in January 2014. However, the results indicate that *in situ* reduction of TCE, cDCE, and vinyl chloride is occurring in the treatment zones of both the former source area and areas downgradient of the injection wells.

### **3.3 Vapor Intrusion Evaluation**

At the request of the Water Board (2013), a vapor intrusion evaluation was conducted by AMEC at the Site in March 2013. Indoor air samples were collected to directly measure the concentrations of COCs

inside the storage facility under conservative conditions in the on-Site building. Prior to the collection of indoor air samples, the HVAC units that service the storage facility were turned off for approximately 36 hours and remained off during sampling. Indoor air samples were collected into 6-Liter Summa™ canisters at nine locations and analyzed for selected COCs<sup>1</sup> using U.S. EPA Method TO-15 in selective ion mode (SIM). The results of the vapor intrusion evaluation indicate that, under current Site conditions, indoor air quality is not impacted by COCs present in groundwater via the vapor intrusion pathway (AMEC, 2013).

### 3.4 Focused Feasibility Study

In 2010 the Water Board requested that AMD conduct an FFS in order to help the Water Board evaluate the current and potential revised cleanup plans and prepare a revised final Site Cleanup Requirements Order (Water Board, 2010). The FFS evaluated current Site conditions and considered five remedial alternatives:

1. No further action,
2. Groundwater extraction and treatment,
3. MNA in the A Zone and groundwater extraction and treatment in the B Zones,
4. ISB and MNA, and
5. Permeable reactive barrier.

The alternatives considered in the FFS were evaluated using the criteria set forth in the National Contingency Plan and the EPA's guidance on conducting a feasibility study (EPA, 1988) under CERCLA (EPA, 1980).

Based on the FFS, the new proposed remedy for the Site is ISB with MNA and institutional controls. It was determined that this alternative had the greatest potential of accelerating Site cleanup, and would outperform the other alternatives in terms of short-term and long-term effectiveness and performance. Implementation of the revised remedy would include the following components:

- ISB via substrate addition using groundwater recirculation and/or direct injection,
- Groundwater recirculation for hydraulic control,
- MNA when COC concentrations resemble comparable upgradient groundwater conditions, and
- Institutional Controls (the updated deed restriction)

The FFS was submitted to the Water Board and EPA in May 2011 (AMEC, 2011); the EPA reviewed the FFS and provided comments to AMD via the Water Board in June 2013. Haley & Aldrich incorporated the comments and submitted a Revised FFS in September 2013 (Haley & Aldrich, 2013b). The Revised FFS is currently under review by the EPA.

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<sup>1</sup> Indoor air samples were analyzed for COCs detected in groundwater samples collected from the A and B1 zones during the two most recent years of annual sampling. In addition to chemicals identified as COCs, indoor air samples also were analyzed for chlorobenzene, chloroethane, 1,3-dichlorobenzene, and 1,4-dichlorobenzene.

## **4. REMEDIAL SYSTEM PERFORMANCE AND EFFECTIVENESS**

### **4.1 Remedial Objectives**

The objective of the remediation program for the Site is to: (1) limit the potential for COCs to migrate off-Site from on-Site sources; and, (2) reduce the mass of COCs beneath the Site to expedite site cleanup.

The cleanup goal for soil was established in the Order as a total COC concentration of 1 part per million (ppm) in vadose zone soil; or, if COC concentrations in soil greater than 1 ppm were identified, then a concentration such that partitioning of COCs from soil into groundwater would not cause concentrations to exceed the groundwater cleanup standard. The Water Board granted no further action for unsaturated zone soil at the Site in May 2008 (Water Board, 2008). The cleanup goals for groundwater COCs are based on the California Maximum Contaminant Levels (MCLs) and are summarized below:

| <b>Compound</b>          | <b>Cleanup Goal (<math>\mu\text{g/L}</math>)</b> |
|--------------------------|--|
| 1,2-Dichlorobenzene      | 600  |
| 1,1-Dichloroethane       | 5  |
| 1,1-Dichloroethene       | 6  |
| cis-1,2-Dichloroethene   | 6  |
| trans-1,2-Dichloroethene | 10   |
| Freon 113                | 1,200  |
| Tetrachloroethene        | 5  |
| 1,1,1-Trichloroethane    | 200  |
| Trichloroethene          | 5  |
| Vinyl Chloride           | 0.5  |

### **4.2 Soil**

Previous soil remediation activities are summarized in the previous 5-Year Review (AMEC, 2008); no soil remediation has occurred during the reporting period of 2009 through 2013. As described above, the Water Board granted no further action for unsaturated zone soil at the site in May 2008 (Water Board, 2008).

### **4.3 Groundwater**

#### **4.3.1 Evaluation of Hydraulic Containment**

The GETS was operated between 1984 and 2002 to provide hydraulic containment and removal of COC-affected groundwater. Operation of the GETS was discontinued in 2002 with the Water Board's approval in order to complete the pilot test and full-scale implementation of the ISB program (Geomatrix, 2004).

Two A-Zone wells (36-S and 37-S), one B1-Zone well (36-D), and one B2-Zone well (36-DD) are located approximately 250 feet downgradient (north) of the site, on the upgradient (southern) boundary of the former TRW Microwave site. These wells have continued to be

sampled annually since the GETS was discontinued. The concentrations of COCs in these downgradient wells have decreased since the GETS ceased operating in 2002 (Appendix A). Therefore, ISB appears to be at least as protective of off-Site properties as hydraulic containment with the GETS.

#### 4.3.2 Concentration Trends

Historical concentrations of COCs detected in samples collected from Site monitoring wells are included as Appendix A. Concentration trend plots for the main COCs (TCE, cDCE, and VC) are included as Figures 4 through 6. The major conclusions from these trend analyses are:

1. A rapid rate of decrease in concentrations of TCE and cDCE for groundwater samples from monitoring wells near the former 901 Thompson Place ANS (source area) is apparent between 1982 and 1988, indicating that the soil excavation and GETS successfully removed a significant amount of mass of the COCs from the subsurface.
2. A rapid rate of decrease in TCE and cDCE concentrations in groundwater samples from monitoring wells near and downgradient of the 901 Thompson Place ANS is observed from the beginning of ISB treatment to the present, indicating the successful removal of COCs from the subsurface via reductive dechlorination. Concentrations in four wells in the vicinity of the ISB treatment system (16-S, 16-D, 28-S, and 28-D) are now near or below the cleanup goals.

A-zone wells 16-S, 22-S, 23-S and 28-S are nearest the former 901 Thompson Place ANS. Concentrations of TCE and cDCE have decreased in these wells by approximately two to four orders of magnitude since monitoring began in 1982 (Figure 4). The concentrations of TCE and cDCE for well 28-S decreased from a maximum of 110,000 and 70,000 µg/L, respectively, in May 1983 (prior to the initial excavation), to <0.5 and 4.4 µg/L in October 2013 (Appendix A). The rates of concentration decrease were highest following the initial excavation and startup of the GETS, and after the start of ISB treatment. A similar trend of overall decreasing concentrations has been observed for wells 22-S, 23-S and 16-S.

The concentrations of TCE and cDCE for B1-zone wells 28-D, 23-D, and 16-D, and B2-zone well 22-DD (all located near the former 901 Thompson Place ANS) show similar trends (Figures 5 and 6), where concentrations initially near or greater than 10,000 µg/L have decreased to concentrations close to or below the cleanup goals. The greatest decrease occurred following the excavation and implementation of GETS, after which the concentrations more or less leveled out until the start of ISB treatment. This decreasing trend for wells near the former source area is an indication that the excavations, GETS system, and ISB treatment system have been successful in removing most of the TCE and cDCE related to the former ANS from soil and groundwater beneath the Site.

The concentrations of TCE in samples collected from a majority of other A-zone monitoring wells at the Site have remained generally consistent or decreased, but remain greater than their cleanup concentration goals at most locations, for the review period of 2009 to 2013. The concentrations of cDCE are typically near or below the cleanup goals (with the exception of well 27-S, which is located upgradient of the former 901 Thompson source area and intercepts groundwater impacted by upgradient, off-Site source[s]). In general, TCE is detected at higher concentrations than cDCE in the areas away from the ISB treatment area, reflecting a regional

groundwater impact of predominantly TCE from multiple off-Site sources (Geomatrix, 2008). Concentrations of TCE and cDCE for groundwater samples from the other B1-zone monitoring wells cross- or upgradient of the Site source areas have remained stable or decreased during this review period as well.

#### **4.3.3 Extraction Mass Removal and Efficiency**

Since groundwater extraction began in 1983, approximately 232 million gallons of water have been extracted and approximately 832 pounds of total COCs have been removed (Table III). Between 1984 and 1995, the GETS removed COCs at a rate of approximately 4.4 pounds of COCs per million gallons of groundwater extracted (lb/Mgal). This efficiency decreased to an average of 2.4 lb/Mgal between 1996 and 2002, at which point groundwater extraction and treatment were suspended to accommodate the ISB pilot test.

As part of the full-scale ISB Program, COCs were removed from groundwater ex situ using GAC prior to being amended with carbohydrate in advance of re-injection. While the volume of groundwater circulated (approximately 1.5 million gallons between 2006 and 2013), and the mass of COCs removed ex situ (approximately 13 pounds), is less than when the GETS was in operation, the majority of the COC removal by the ISB system has likely occurred in situ, from carbohydrate injection. This is supported by the measured increase in ethene concentrations in collected samples; ethene is an end-product of TCE reduction, and cDCE, and vinyl chloride are intermediate products of the same reduction process. Therefore, one molecule of ethene forms for every molecule of TCE that is sequentially reduced to cDCE, vinyl chloride, and finally ethene, assuming the ethene is itself not consumed. Because ethene itself is biodegradable in the subsurface, it is difficult to accurately track COC mass removal in situ. Nonetheless, the ex situ mass removal has been tracked during the ISB system operation, to further assess in situ treatment processes. As shown in Table III, the efficiency of the ISB ex situ component is much greater than the previous GETS, removing COCs at an average rate of 9.3 lb of COCs/Mgal (compared to 2.4 lb/Mgal for the GETS). However, ex situ removal rates have declined as in situ treatment has substantially decreased the availability of mobile COCs in the subsurface beneath the site.

#### **4.3.4 ISB Program**

The full-scale ISB Program, described in Section 3.2, began operating in December 2005 and continued until May 2008, at which point active delivery of carbohydrate and groundwater circulation were discontinued. Performance monitoring of the 13 ISB monitoring wells continued while the system was not operating to assess ongoing, passive destruction of COCs.

As described in earlier sections, the results of performance monitoring in 2011 indicated the rate of ISB processes may not have been sufficient to further reduce COC concentrations (AMEC, 2012) due to depletion of TOC. Therefore carbohydrate addition and groundwater circulation were resumed on a limited basis, between October 2011 and February 2012, and again between November 2012 and February 2013. Haley & Aldrich anticipates that the ISB system will continue to operate, with sodium lactate as the substrate.

A summary of the performance monitoring results are included as Table 4, and historical results for ISB performance monitoring are included in Appendix B. The major conclusions of the results include:

- Decrease in COC concentrations of up to 100% (non-detect) from pre-ISB levels in performance monitoring wells. The majority of wells in the ISB monitoring network saw decreases in COC concentrations of 90% or greater since the start of ISB, indicating that ISB is successfully removing target COCs from the subsurface.
- Decreases in concentration in samples from most Site monitoring wells near and downgradient of the ISB treatment area suggest that ISB is having a positive effect on groundwater chemistry outside the treatment zone.
- Depleted concentrations of TOC in groundwater samples indicate that additional substrate amendment and groundwater circulation are required to sustain active ISB processes.

#### **4.4 Vapor Intrusion Evaluation**

As described in Section 3.3, a vapor intrusion evaluation was conducted at the site in March 2013. The results indicated that under current Site conditions, indoor air quality is not impacted by concentrations of COCs present in groundwater via the vapor intrusion pathway (AMEC, 2013).

In the Revised FFS (Haley & Aldrich, 2013b), risk-based concentrations (RBCs) were developed for COCs detected in groundwater to evaluate the vapor intrusion pathway. The RBCs were developed using a methodology that is consistent with the guidance published by the EPA and Cal-EPA, and represent the concentrations of COCs that could remain in groundwater without posing unacceptable human health risks to current and future on-Site populations through the vapor intrusion pathway. The groundwater RBCs developed for future commercial/industrial site use were higher than the cleanup goals established for the Site, indicating that the cleanup goals are protective of future commercial/industrial use from the perspective of vapor intrusion. However, the cleanup goal for VC was greater than the groundwater RBC for future residential site use, indicating that potential future residential site use may require additional evaluation.

#### **4.5 Institutional Control**

Haley & Aldrich, Inc. contracted Environmental Data Resources, Inc. (EDR) of Milford, Connecticut, to conduct a title search on the 901 Thompson Place property and identify any environmental liens, and other activity and use limitations such as engineering controls and institutional controls. Institutional control in the form of a deed restriction dated May 20, 2005 was identified by EDR (Appendix C). Restrictions on site development and use include:

- Residential development for human habitation is not permitted except for occupation by an on-Site manager
- Hospital, health clinic, day-care center, or school development is prohibited
- Extraction, use, or consumption of groundwater beneath the Site, except for remediation or construction dewatering is prohibited

#### **4.6 Cost Evaluation**

From 1981 to 2008, the total cost of addressing soil and groundwater contamination beneath the Site was reported to be \$6,257,900 (AMEC, 2008). Since that time, AMD has spent \$0 on capital expenditures and \$641,193 on operation, maintenance, monitoring and consulting fees (based on information provided by AMD), amounting to approximately \$641,193 for this review period.

The total cost for remediation to date is: \$ 6,899,093

Haley & Aldrich estimates that the yearly costs associated with continued ISB operation, monitoring, reporting, and consulting fees will be \$120,000 per year for the next reporting period of 2014-2018.

## 5. CONCLUSIONS

- Shallow soil investigation and remediation at the Site is complete, as confirmed in the Water Board's No Further Action letter (Water Board, 2008). The excavations in 1983, 1984, and 1992 are estimated to have removed more than 10 pounds of COCs and shallow soil is no longer considered a source of groundwater impacts.
- The GETS was operated between 1984 and 2002 to provide hydraulic containment and removal of COC-affected groundwater. Operation of the GETS was discontinued in 2002 with the Water Board's approval in order to complete the pilot test and full-scale implementation of the ISB program. Soil excavation and the GETS operation successfully removed a significant amount of mass of the COCs from the subsurface.
- Concentrations of COCs in wells located near the downgradient property boundary have decreased since the GETS was shut down in 2002, indicating that cessation of groundwater extraction has not resulted in higher groundwater concentrations in samples collected from off-Site monitoring wells.
- The full-scale ISB program has removed much of the remaining COC mass in the area near the former 901 Thompson Place source area through *in situ* reductive dechlorination and *ex situ* treatment with carbon filtration. The ISB treatment has resulted in decreases in concentrations of TCE and cDCE by greater than 90% in a majority of ISB monitoring since the start of the ISB program. Decreases in chemical concentrations have also been observed based on measurements of concentrations in samples collected from Site monitoring wells located hydraulically downgradient of the treatment area.
- A Revised FFS has been submitted to the Water Board and EPA recommending that ISB and MNA be adopted as the final remedy for the Site.
- The Site poses no unacceptable risk to human health and the environment. The two primary exposure routes for human exposure from groundwater chemicals are ingestion (of drinking water) and inhalation (of vapors off-gassing from groundwater). The ingestion pathway is incomplete because the restrictive covenant prohibits the use of shallow groundwater beneath the site as a drinking water source. The vapor intrusion evaluation performed in 2013 concluded that indoor air quality is not impacted by COCs in groundwater via the vapor intrusion pathway.

## **6. RECOMMENDATIONS**

- Adopt ISB and MNA as the final remedy for groundwater, per the Revised FFS.
- Operate the ISB system on a continued, pulsed basis, and continue to monitor the progress and effectiveness of the ISB program on a quarterly basis.
- Conduct groundwater monitoring events at the Site on an annual basis.

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## **TABLES**

**TABLE I**  
**SITE CHRONOLOGY<sup>1,2</sup>**

Former 901/902 Thompson Place  
Sunnyvale, California

| Year | Activity   |
|------|--|
| 1982 | Installation of 27 groundwater monitoring wells begins   |
| 1982 | Initiation of groundwater monitoring   |
|      | Goundwater extraction and treatment from DW-1, DW-2, and DW-3 begins.  |
|      | Soil Investigation at 901 Thompson Place (north of building)   |
| 1983 | Removal of 901 Thompson Place acid neutralization system (ANS) and soil excavation   |
|      | Installation of 27 groundwater monitoring wells completed  |
|      | Soil Investigation near south end of 902 Thompson Place building   |
| 1984 | Removal of 902 Thompson Place ANS and soil excavation  |
| 1985 | Monthly groundwater monitoring begins  |
| 1987 | Groundwater monitoring moved to a quarterly basis  |
| 1988 | Additional soil investigation at 901 Thompson Place  |
|      | Installation of 3 additional monitoring wells (52-, 53-DD, and 54-S)   |
|      | Goundwater extraction and treatment from DW-4, DW-5, and DW-6 begins.  |
| 1989 | Soil Gas Investigation   |
| 1992 | Additional soil excavation of former 901 ANS   |
| 1993 | Groundwater extraction and treatment from DW-7 and DW-8 begins.  |
| 1996 | Groundwater monitoring frequency changed to a semi-annual basis  |
| 1998 | Groundwater monitoring frequency changed to an annual basis  |
| 2000 | Adjustments made to the GETS   |
|      | Subsurface Investigation in area of former 901 ANS   |
| 2002 | <i>In situ</i> bioremediation (ISB) pilot test begins  |
| 2004 | ISB pilot test ends  |
|      | Additional subsurface investigation  |
| 2005 | Full-scale ISB Program begins  |
|      | The Water Board approves soil remediation and grants a "No Further Action" letter for soil remediation.  |
| 2008 | The Full-scale ISB Program is converted from an active to a passive program, where ongoing intrinsic bioremediation is monitored on a quarterly basis. |
|      | Focused Feasibility Study (FFS) submitted recommending ISB and monitored natural attenuation (MNA) as the revised remedy for the site.                 |
| 2011 | Limited restart of the ISB system to increase carbohydrate content of the subsurface   |
|      | Indoor air investigation to evaluate vapor intrusion   |
| 2013 | Revised FFS submitted  |

**Notes:**

1. Site activities from 1982 through 2000 are compiled from the Five-Year report submitted by Arcadis in 2001.
2. Site activities from 2002 through 2008 are compiled from the Third Five-Year Review Report submitted by AMEC in 2008.

**TABLE II**

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**SUMMARY OF GROUNDWATER MONITORING DATA, 2009 THROUGH 2013**

Former 901/902 Thompson Place  
Sunnyvale, California

|   | 2009  | 2010  | 2011  | 2012  | 2013  |
|---|-------|-------|-------|-------|-------|
| <b>Maximum Water Level (A-zone well), feet msl</b>                        | 41.69 | 41.81 | 42.17 | 41.97 | 41.48 |
| <b>Minimum Water Level (A-zone well), feet msl</b>                        | 34.64 | 34.84 | 35.21 | 35.06 | 34.78 |
| <b>Maximum Water Level (B1-zone well), feet msl</b>                       | 42.67 | 42.99 | 43.47 | 43.18 | 42.98 |
| <b>Minimum Water Level (B1-zone well), feet msl</b>                       | 34.66 | 34.85 | 35.24 | 35.09 | 34.82 |
| <b>Maximum Water Level (B2-zone well), feet msl</b>                       | 40.83 | 41.54 | 42.60 | 42.26 | 41.84 |
| <b>Minimum Water Level (B2-zone well), feet msl</b>                       | 34.73 | 35.04 | 35.86 | 35.69 | 35.39 |
| <b>Water Level at 35-DDD (B3-zone), feet msl</b>                          | 38.92 | 39.99 | 41.48 | 41.17 | 40.41 |
|   |       |       |       |       |       |
| <b>Number of A-zone Wells with VOCs &gt; MCL</b>                          | 9     | 9     | 8     | 9     | 9     |
| <b>Number of B1-zone Wells with VOCs &gt; MCL</b>                         | 8     | 8     | 8     | 8     | 8     |
| <b>Number of B2-zone Wells with VOCs &gt; MCL</b>                         | 3     | 3     | 3     | 3     | 3     |
|   |       |       |       |       |       |
| <b>Maximum TCE Concentration (A-zone well), µg/L</b>                      | 330   | 300   | 270   | 270   | 230   |
| <b>Maximum TCE Concentration (B1-zone well), µg/L</b>                     | 180   | 160   | 260   | 280   | 280   |
| <b>Maximum TCE Concentration (B2-zone well), µg/L</b>                     | 94    | 97    | 150   | 150   | 170   |
|   |       |       |       |       |       |
| <b>Maximum cDCE Concentration (A-zone well), µg/L</b>                     | 200   | 350   | 270   | 120   | 130   |
| <b>Maximum cDCE Concentration (B1-zone well), µg/L</b>                    | 350   | 350   | 34    | 29    | 28    |
| <b>Maximum cDCE Concentration (B2-zone well), µg/L</b>                    | 84    | 78    | 12    | 24    | 11    |
|   |       |       |       |       |       |
| <b>Gallons Pumped, millions of gallons<sup>1</sup></b>                    | 0     | 0     | 0.1   | 0.2   | 0.1   |
| <b>Annual VOCs Removed from Extracted Groundwater, pounds<sup>1</sup></b> | 0     | 0     | 1.0   | 1.3   | 0.7   |
| <b>Pounds of VOCs/million gallons<sup>2</sup></b>                         | 0     | 0     | 9.3   | 6.3   | 5.9   |

**Notes:**

1. Volume of groundwater extracted, treated, amended with carbohydrate, and reinjected as part of ISB operations.
2. Pounds removed only includes ex-situ treatment with carbon, and does not account for destruction of VOCs in the subsurface due to ISB processes.

**Abbreviations:**

VOCs = volatile organic compounds.

TCE = trichloroethene

cDCE = cis-1,2-dichloroethene

feet msl = feet below mean sea level

NA = not available

ISB = in situ bioremediation

**TABLE III**  
**STATUS OF CHEMICALS REMOVED THROUGH 2013**  
Former 901/902 Thompson Place  
Sunnyvale, California

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| Mechanism                        | Volume Extracted <sup>1</sup><br>(gallons) | Average Influent VOCs<br>(µg/L) | Estimated Total VOCs Removed<br>(pounds) | Extraction System Efficiency (lb/MG) |
|----------------------------------|--|---------------------------------|--|--------------------------------------|
| 1983/1984 Excavations            | NA   | NA                              | 10                                       | NA                                   |
| 1992 Excavation                  | NA   | NA                              | 0.3                                      | NA                                   |
| Groundwater Extraction           |  |                                 |  |                                      |
| 1984 through 1995 <sup>2,3</sup> | 126,940,000                                | 529                             | 559                                      | 4.4                                  |
| Groundwater Extraction           |  |                                 |  |                                      |
| 1996                             | 16,140,000                                 | 283                             | 38                                       | 2.4                                  |
| 1997                             | 15,817,920                                 | 339                             | 45                                       | 2.8                                  |
| 1998                             | 16,636,170                                 | 277                             | 38                                       | 2.3                                  |
| 1999                             | 16,170,000                                 | 251                             | 33                                       | 2.0                                  |
| 2000                             | 12,291,830                                 | 262                             | 27                                       | 2.2                                  |
| 2001                             | 13,032,970                                 | 281                             | 29                                       | 2.2                                  |
| 2002                             | 13,495,145                                 | 363                             | 40                                       | 2.9                                  |
| <b>SUBTOTALS<sup>3</sup></b>     | <b>103,584,035</b>                         | <b>294</b>                      | <b>250</b>                               | <b>2.4</b>                           |
| 2006                             | 586,929                                    | 1,287                           | 5.9                                      | 10.1                                 |
| 2007                             | 154,649                                    | 2,653                           | 3.0                                      | 19.5                                 |
| 2008                             | 291,553                                    | 539                             | 1.3                                      | 4.5                                  |
| 2009 <sup>4</sup>                | 0  | NA                              | 0.0                                      | NA                                   |
| 2010 <sup>4</sup>                | 0  | NA                              | 0.0                                      | NA                                   |
| 2011                             | 109,204                                    | 1,113                           | 1.0                                      | 9.3                                  |
| 2012                             | 205,125                                    | 761                             | 1.3                                      | 6.3                                  |
| 2013 <sup>5</sup>                | 114,370                                    | 721                             | 0.7                                      | 6.0                                  |
| <b>SUBTOTALS<sup>3</sup></b>     | <b>1,461,830</b>                           | <b>1,271</b>                    | <b>13</b>                                | <b>9.3</b>                           |
| <b>TOTAL<sup>3</sup></b>         | <b>231,985,865</b>                         |                                 | <b>832</b>                               | <b>3.6</b>                           |

**Notes:**

1. The extraction volumes (and associated VOCs removed estimate) are based upon meter readings for individual extraction wells.
2. Estimated values based on data from a previous 5-year status report (Arcadis, 2001).
3. Mass removed values rounded to nearest pound.
4. ISB system was in passive mode and no groundwater extraction occurred in 2009 and 2010.
5. Total through October 2013, the latest that data was available. The ISB system continues to operate.

**Abbreviations:**

VOCs = volatile organic compounds.

µg/L = micrograms per liter.

lb/MG = pounds VOCs removed per million gallons extracted.

ISB = *In Situ* Bioremediation.

NA = not available.

**TABLE IV**  
**SUMMARY OF ISB PERFORMANCE MONITORING RESULTS**

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Former 901/902 Thompson Place  
Sunnyvale, California

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ )

| Well ID              | TCE                    |                             |                    | cDCE                |                     |                      |
|----------------------|------------------------|-----------------------------|--------------------|---------------------|---------------------|----------------------|
|                      | Start of ISB (2005)    | End of ISB (2008)           | Most Recent (2013) | Start of ISB (2005) | End of ISB (2008)   | Most Recent (2013)   |
| <b>A Zone Wells</b>  |                        |                             |                    |                     |                     |                      |
| 16-S                 | <b>6.1<sup>1</sup></b> | <0.5 <sup>2,3</sup> (-100%) | <0.5 (-100%)       | <b>29</b>           | <b>4.2</b> (-86%)   | <b>2.0</b> (-93%)    |
| 23-S                 | <b>37</b>              | <b>29</b> (-22%)            | <b>37</b> (0%)     | <b>84</b>           | <b>130</b> (+55%)   | <b>130</b> (+55%)    |
| 28-MW                | <b>10</b>              | <b>0.7</b> (-93%)           | <0.5 (-100%)       | <b>26</b>           | <b>1.9</b> (-93%)   | <b>1.7</b> (-93%)    |
| DW-2                 | <b>3.0<sup>4</sup></b> | <b>0.6</b> (-80%)           | <0.5 (-100%)       | <b>110</b>          | <0.5 (-100%)        | <b>2.0</b> (-98%)    |
| X2A                  | <b>200</b>             | <0.5 (-100%)                | <0.7 (-100%)       | <b>230</b>          | <b>15</b> (-93%)    | <0.7 (-100%)         |
| <b>B1 Zone Wells</b> |                        |                             |                    |                     |                     |                      |
| 16-D                 | <b>740</b>             | <b>1.7</b> (-99%)           | <1.7 (-100%)       | <b>970</b>          | <b>2.5</b> (-99%)   | <b>22</b> (-98%)     |
| 23-D                 | <b>230</b>             | <b>300</b> (+30%)           | <b>280</b> (+22%)  | <b>390</b>          | <b>8.0</b> (-98%)   | <b>6.6</b> (-98%)    |
| PMW-2-1              | <b>82</b>              | <b>58</b> (-29%)            | <b>57</b> (-30%)   | <b>6,700</b>        | <b>4,900</b> (-27%) | <b>6,500</b> (-3%)   |
| DW-1                 | <b>440</b>             | <b>2.5</b> (-99%)           | <b>0.7</b> (-100%) | <b>3,700</b>        | <b>1.6</b> (-100%)  | <b>0.6</b> (-100%)   |
| DW-7                 | <b>300</b>             | <b>17</b> (-94%)            | <b>11</b> (-96%)   | <b>100</b>          | <b>190</b> (+90%)   | <b>150</b> (+50%)    |
| X1B                  | <b>360</b>             | <b>100</b> (-72%)           | <b>100</b> (-72%)  | <b>1,600</b>        | <b>680</b> (-58%)   | <b>640</b> (-60%)    |
| X2B1                 | <b>420</b>             | <b>30</b> (-93%)            | <b>100</b> (-76%)  | <b>420</b>          | <b>360</b> (-14%)   | <b>1,700</b> (+305%) |
| <b>B2 Zone Well</b>  |                        |                             |                    |                     |                     |                      |
| PMW-2-3              | <b>290</b>             | <b>250</b> (-14%)           | <b>210</b> (-28%)  | <b>440</b>          | <b>220</b> (-50%)   | <b>110</b> (-75%)    |

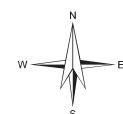
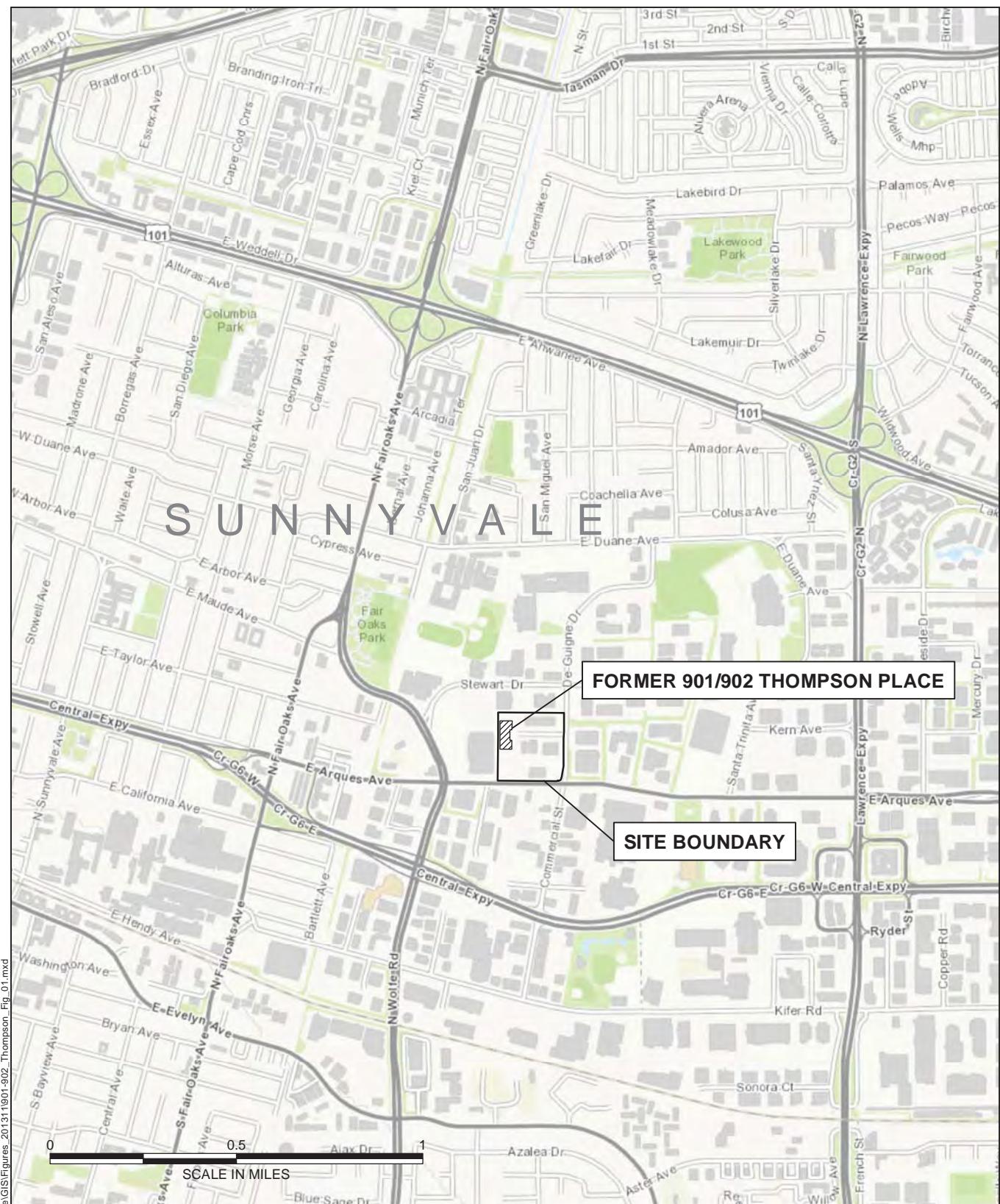
**Notes:**

1. Results in **bold** indicate the analyte was detected in the sample above the reporting limit.
2. "<" indicates that the analyte was not detected in the sample at or above the reporting limit.
3. Number in parentheses is the percent change in concentration since the start of ISB.
4. Sample collected February 2006.

**Abbreviations:**

TCE = tetrachloroethene  
cDCE = cis-1,2-dichloroethene

## **FIGURES**



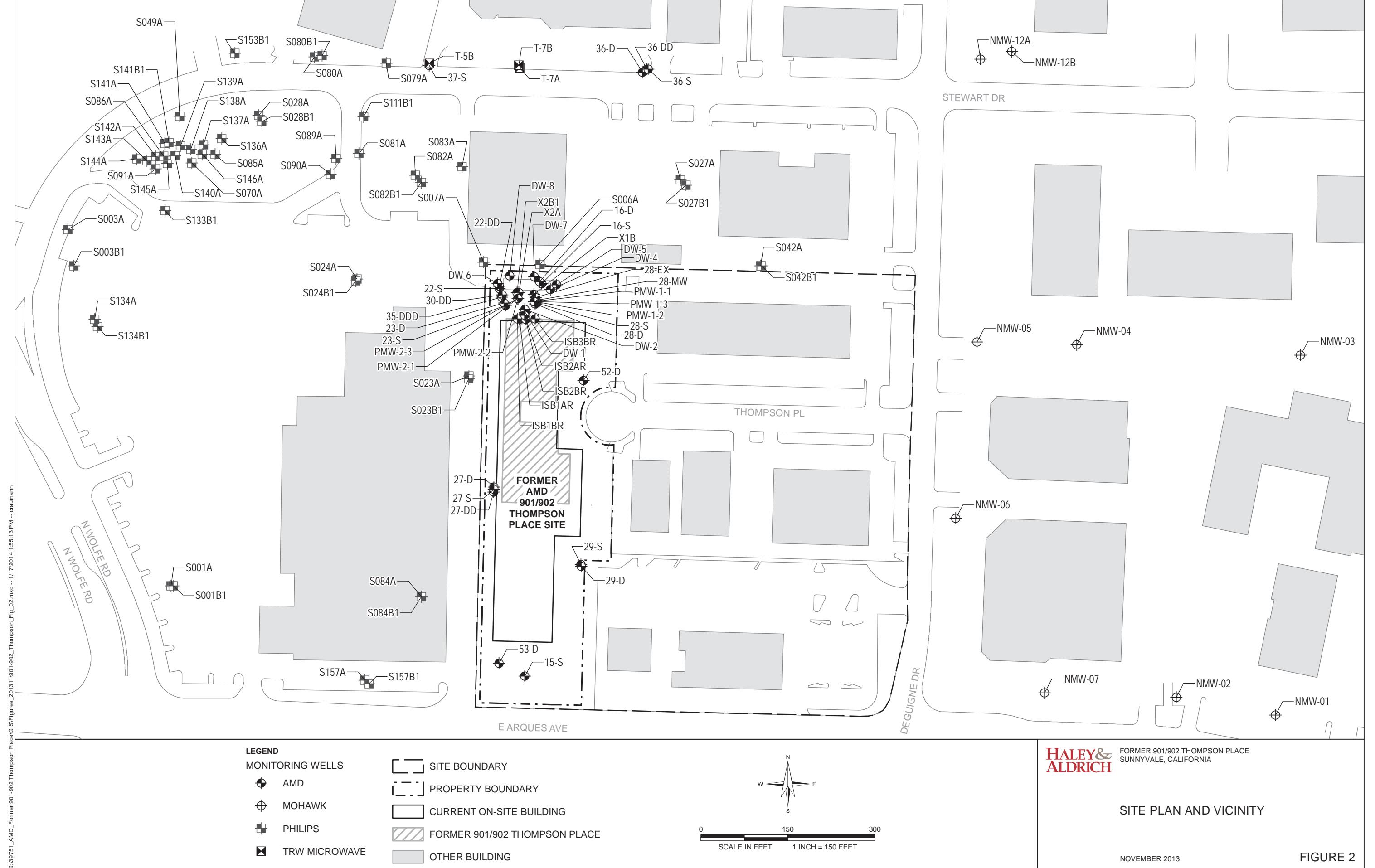
**HALEY & ALDRICH**

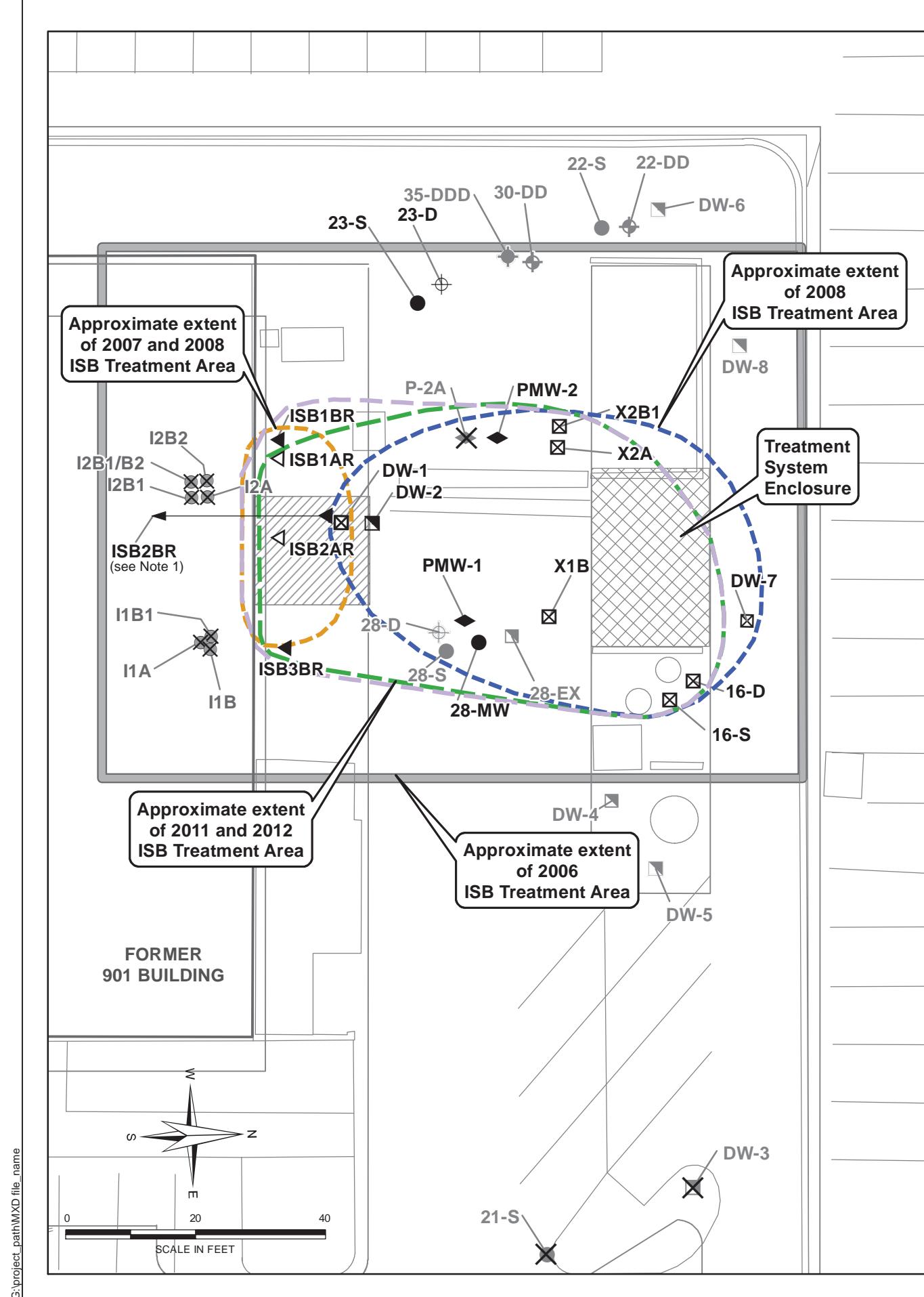
FORMER 901/902 THOMPSON PLACE  
SUNNYVALE, CALIFORNIA

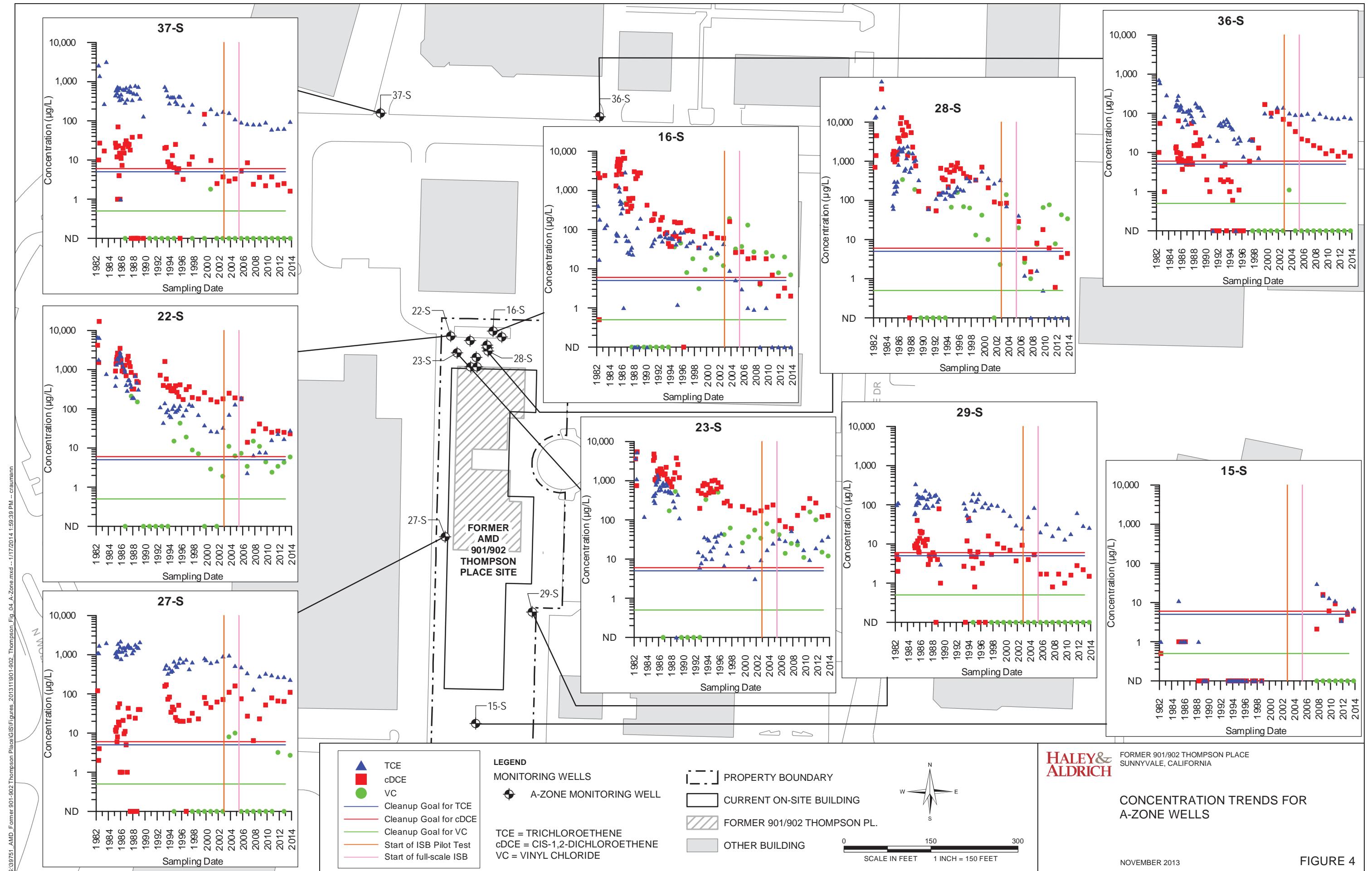
SITE LOCATION MAP

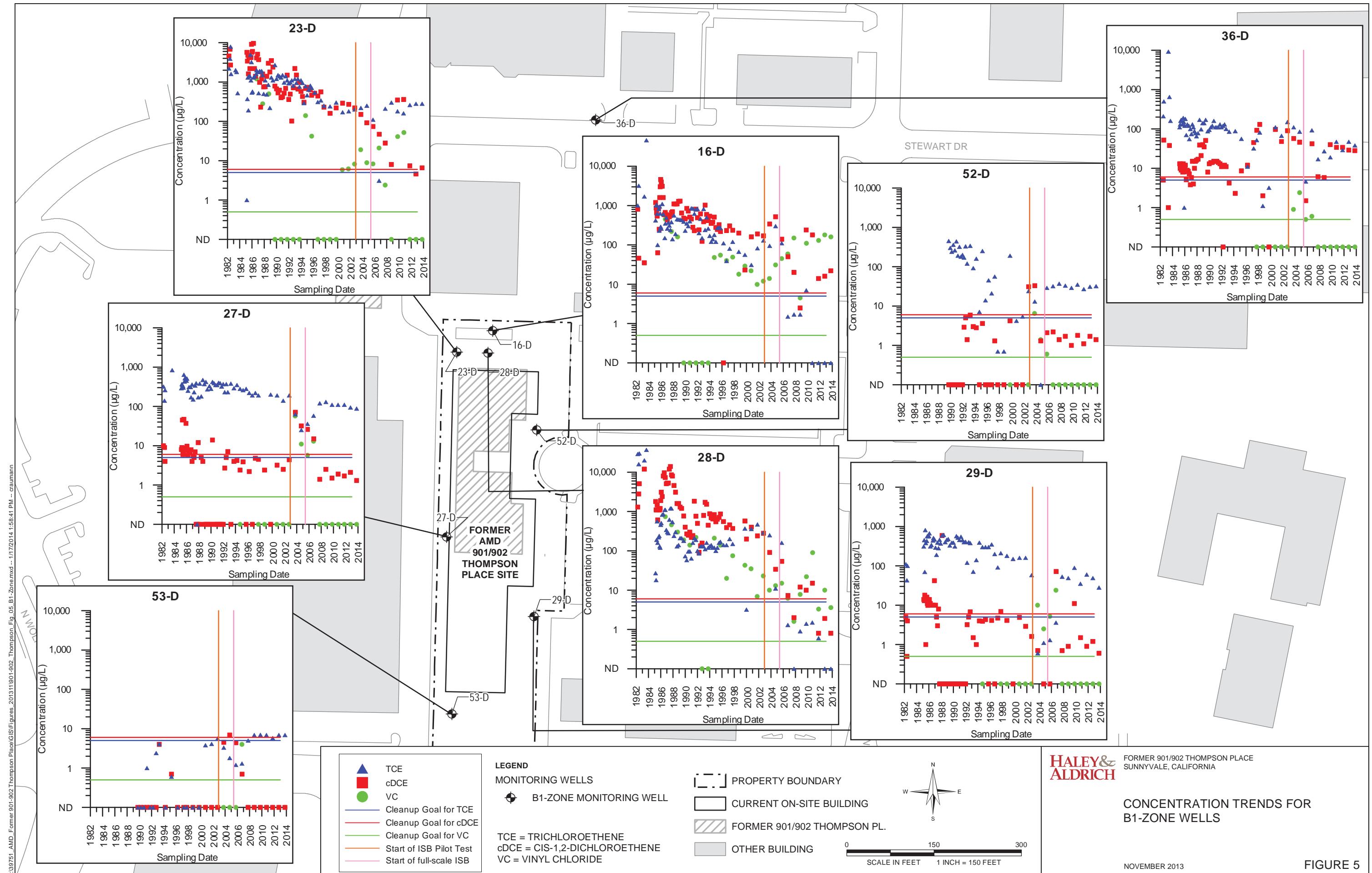
JANUARY 2014

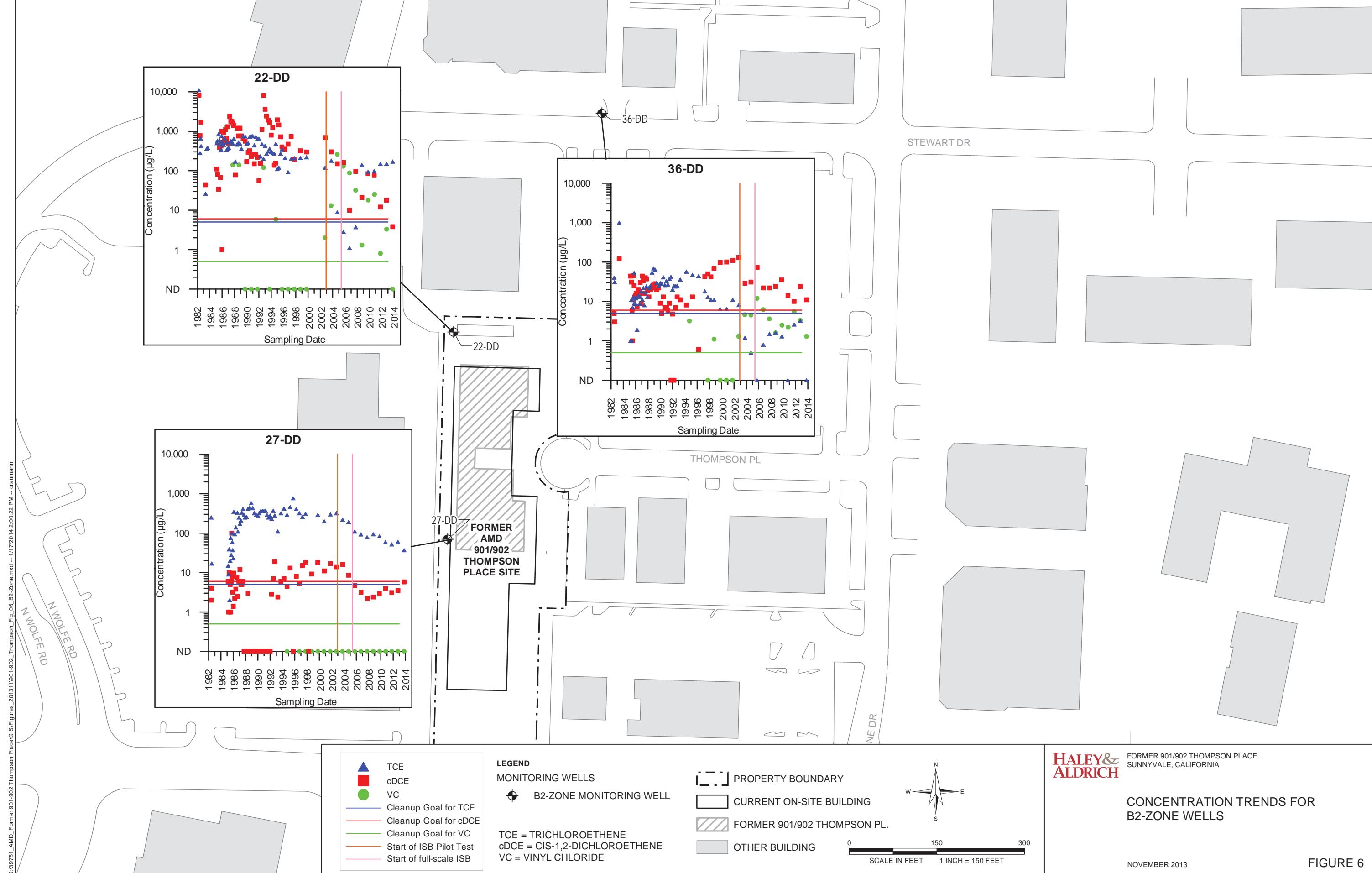
FIGURE 1











## **APPENDIX A**

### **Historical TCE, cDCE, and Total VOC Concentrations**

## APPENDIX A-1

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## HISTORICAL TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER

Former 901/902 Thompson Place

Sunnyvale, California

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ )

| Date   | Extraction Wells |      |      |      |      |      |      | A-Zone Wells |      |      |      |      |      |      |      |      |      |       |       |        |      | B1-Zone Wells |      |      |       |      |      |       | B2-Zone Wells |       |      |      | B3-Zone Well |       |       |       |       |        |    |
|--------|------------------|------|------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|-------|-------|--------|------|---------------|------|------|-------|------|------|-------|---------------|-------|------|------|--------------|-------|-------|-------|-------|--------|----|
|        | DW-1             | DW-2 | DW-3 | DW-4 | DW-5 | DW-6 | DW-7 | DW-8         | 14-S | 15-S | 16-S | 17-S | 21-S | 22-S | 23-S | 25-S | 26-S | 27-S  | 28-S  | 29-S   | 36-S | 37-S          | 38-S | 54-S | 16-D  | 23-D | 25-D | 27-D  | 28-D          | 29-D  | 36-D | 52-D | 53-D         | 22-DD | 27-DD | 30-DD | 36-DD | 35-DDD |    |
| Apr-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | 1    | 1    | 400  | 1    | 2100 | 6700 | 3700 | 1450 | 1400 | 1100  | 13000 | 99     | NS   | NS            | NS   | NI   | 1000  | 2200 | 600  | 320   | 29000         | 110   | NS   | NI   | NI           | 11000 | NS    | 740   | NS    | NI     |    |
| Jun-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NS   | NS   | 17   | NS   | 910  | 1800 | 1100 | 640  | 440  | 1100  | 14000 | 110    | 710  | 2600          | 1250 | NI   | 3200  | 3900 | 600  | 140   | 16000         | 43    | NS   | NI   | NI           | 280   | 250   | 2200  | NS    | NI     |    |
| Jul-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NS   | NS   | 180  | NS   | 6500 | 5300 | 210  | 1200 | 1700 | 23000 | 110   | NS     | NS   | NS            | NI   | NS   | 7900  | 170  | 260  | 30000 | 100           | 210   | NI   | NI   | 660          | 17    | NS    | 40    | NI    |        |    |
| Aug-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 3900 | NS   | NS   | NS   | NS   | NS   | NS    | NS    | 590    | 1400 | 2200          | NI   | NS   | 1600  | NS   | NS   | NS    | NS            | 500   | NI   | NI   | 420          | NS    | 930   | 31    | NI    |        |    |
| May-83 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 110  | NS   | NS   | NS   | NS   | NS   | NS    | NS    | 110000 | NS   | 82            | 270  | 2000 | NI    | 1700 | 2000 | NS    | NS            | 20000 | NS   | 9200 | NI           | NI    | 26    | NS    | NS    | 990    | NI |
| Jul-83 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS    | NS    | NS     | NS   | NS            | NS   | NS   | NS    | NS   | NS   | NS    | NS            | 650   | NI   | NI   | 360          | NS    | NS    | NS    | NI    |        |    |
| Sep-83 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 130  | NS   | 780  | 120  | NS   | 780  | 2000  | 24000 | NS     | 290  | 3200          | 4000 | NI   | 46000 | 520  | 340  | 840   | 37000         | NS    | 160  | NI   | NI           | 380   | NS    | NS    | NS    | NI     |    |
| Mar-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 11   | 51   | NS   | 810  | 390  | 410  | 1500 | 830   | 1100  | 73     | 58   | 150           | 450  | NS   | NI    | 420  | 1    | 440   | 290           | 27    | 310  | 110  | NI           | NI    | 500   | 15    | 610   | 1      | NI |
| Apr-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 80   | NS   | 920  | 650  | 310  | 1300 | 810  | 910   | 61    | 63     | 170  | 610           | 1700 | NI   | 1000  | 370  | 440  | 370   | 18            | 450   | 130  | NI   | NI           | 580   | 9     | 610   | NS    | NI     |    |
| May-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 75   | NS   | 900  | 1360 | 420  | 1400 | 880  | 1200  | 150   | 340    | 160  | 600           | 1600 | NI   | 1050  | 1300 | NS   | 350   | 190           | 70    | 160  | NI   | NI           | NS    | 39    | 530   | 11    | NI     |    |
| Jun-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 72   | NS   | 1240 | 1860 | 270  | 1010 | 1370 | 950   | 300   | 100    | 220  | 510           | 1710 | NI   | 620   | 190  | 590  | 330   | 560           | 810   | 170  | NI   | NI           | 840   | 2     | 690   | 1     | NI     |    |
| Jul-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 1    | 70   | NS   | 1230 | 1940 | 480  | 1580 | 980   | 870   | 220    | 110  | 160           | 730  | 2380 | NI    | 100  | 1410 | 540   | 300           | 160   | 380  | 160  | NI           | NI    | NS    | 20    | 170   | 7      | NI |
| Aug-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | 1    | NS   | NS   | 4    | 1900 | NS   | 800  | NS   | 1560  | 1900  | NS     | 185  | 280           | 620  | NS   | NS    | 960  | 640  | NS    | NS            | NS    | NS   | 590  | 75           | 1260  | 12    | NS    |       |        |    |
| Sep-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 1200 | NS   | 980  | 1900 | 920  | 1700 | 1200  | 1300  | 240    | 120  | 120           | 690  | 1800 | NI    | 820  | 1400 | 430   | 430           | 220   | 430  | 130  | NI           | NI    | 470   | 28    | 780   | 13     | 7  |
| Oct-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 940  | NS   | 1000 | 1500 | 970  | 1800 | 1100  | 1200  | 170    | 160  | 130           | 420  | 2700 | NI    | 230  | 4900 | 520   | 520           | 240   | 570  | 190  | NI           | NI    | 330   | 100   | 770   | 53     | 8  |
| Nov-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 540  | 23   | 1200 | 2300 | 1400 | 1500 | 1440  | 1200  | 230    | 115  | 136           | 340  | 3000 | NI    | 950  | 1100 | 690   | 530           | 130   | 560  | 150  | NI           | NI    | 350   | 59    | 720   | 9      | 5  |
| Dec-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 1    | 450  | NS   | 1100 | 2800 | 1100 | 2200 | 1200  | 1600  | 300    | 110  | 150           | 690  | 2200 | NI    | 630  | 3200 | 460   | 510           | 120   | 590  | 1    | NI           | NI    | 760   | 37    | 690   | 9      | 4  |
| Jan-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 260  | NS   | 1100 | 2400 | 570  | 2100 | 950   | 2200  | 1500   | 160  | 160           | 1    | 1800 | NI    | 290  | 540  | 620   | 450           | 460   | 570  | 120  | NI           | NI    | 520   | 23    | 9     | 9      | NS |
| Feb-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 490  | NS   | 1100 | 2200 | 1100 | 1400 | 720   | 780   | 820    | 150  | 130           | 470  | 1100 | NI    | 260  | 570  | 450   | 510           | 510   | 670  | 180  | NI           | NI    | 490   | 350   | 700   | 12     | 1  |
| Apr-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 1    | 350  | NS   | 750  | 1500 | 700  | 1030 | 430   | 1200  | 2200   | 150  | 45            | 360  | 2000 | NI    | 1100 | 1300 | 380   | 250           | 830   | 310  | 70   | NI           | NI    | 450   | 94    | 130   | 2      | 1  |
| Jun-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | 1    | NS   | 70   | 1200 | 590  | 1700 | 870  | 1500  | 1800  | 160    | 110  | 640           | 2500 | NI   | 600   | 1400 | 600  | 310   | 860           | 340   | 130  | NI   | NI           | 660   | 140   | 370   | 14    | 4      |    |
| Sep-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI           | NI   | NS   | NS   | 2900 | NS   | 1100 | 1000 | 780  | 3500 | 840   | 1500  | 2000   | 150  | NR            | 620  | 2400 | NI    | 150  | 1600 | 590   | 310           | 1100  | 440  | 120  | NI           | NI    | 520   | 330   |       |        |    |

## APPENDIX A-1

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## HISTORICAL TRICHLOROETHENE CONCENTRATIONS IN GROUNDWATER

Former 901/902 Thompson Place

Sunnyvale, California

Concentrations reported in micrograms per liter (µg/L)

| Date       | Extraction Wells |      |      |      |      |      |      |      | A-Zone Wells |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | B1-Zone Wells |      |      |      |      |      |      |      | B2-Zone Wells |       |       |       | B3-Zone Well |        |
|------------|------------------|------|------|------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|------|------|---------------|-------|-------|-------|--------------|--------|
|            | DW-1             | DW-2 | DW-3 | DW-4 | DW-5 | DW-6 | DW-7 | DW-8 | 14-S         | 15-S | 16-S | 17-S | 21-S | 22-S | 23-S | 25-S | 26-S | 27-S | 28-S | 29-S | 36-S | 37-S | 38-S | 54-S | 16-D          | 23-D | 25-D | 27-D | 28-D | 29-D | 36-D | 52-D | 53-D          | 22-DD | 27-DD | 30-DD | 36-DD        | 35-DDD |
| Oct-93     | NS               | NS   | NS   | NS   | NS   | NS   | 520  | 160  | ND           | ND   | 60   | ND   | 400  | 94   | 10   | NS   | NS   | 330  | 110  | 54   | 60   | 430  | NS   | 1    | 260           | 760  | 370  | 290  | 120  | 140  | NS   | 92   | NS            | 360   | 320   | 460   | NS           | 4      |
| Jan-94     | NS               | NS   | NS   | NS   | NS   | NS   | 280  | ND   | ND           | 60   | ND   | 400  | 68   | 33   | 4    | 39   | 450  | 160  | 39   | 48   | 280  | NS   | ND   | 170  | 1100          | NS   | NS   | 130  | NS   | NS   | NS   | 300  | NS            | 360   | NS    | 3     |              |        |
| Apr-94     | NS               | NS   | NS   | NS   | NS   | NS   | 390  | 290  | ND           | ND   | 61   | ND   | 450  | 62   | 30   | 10   | 34   | 370  | 210  | 40   | 43   | 400  | NS   | 4    | 120           | 950  | 350  | 350  | 140  | 390  | 88   | 160  | ND            | 280   | 420   | 32    | 57           | 2.3    |
| Jul-94     | NS               | NS   | NS   | NS   | NS   | NS   | 440  | 270  | ND           | ND   | 58   | 2    | 480  | 100  | 16   | 2    | 63   | 390  | 140  | 130  | 39   | 400  | 950  | 1    | 140           | 290  | NS   | NS   | 120  | NS   | NS   | NS   | 270           | NS    | 35    | NS    | 5.2          |        |
| Oct-94     | NS               | NS   | NS   | NS   | NS   | NS   | 460  | 350  | ND           | ND   | 86   | 1    | 530  | 120  | 10   | 50   | 86   | 670  | 130  | 190  | 22   | 400  | 210  | 1    | 180           | 780  | 350  | 280  | 120  | 300  | NS   | 7.1  | NS            | 480   | 290   | 58    | NS           | 2      |
| Jan-95     | NS               | NS   | NS   | NS   | NS   | NS   | 370  | 350  | ND           | ND   | 42   | 1    | 370  | 84   | 20   | 8    | 82   | 530  | 130  | 72   | ND   | 310  | 580  | ND   | 120           | 460  | NS   | NS   | 100  | NS   | NS   | NS   | 110           | NS    | 5.9   | NS    | NS           |        |
| Apr-95     | NS               | NS   | NS   | NS   | NS   | NS   | 420  | 240  | ND           | ND   | 1.2  | ND   | 340  | 91   | 37   | 7.5  | 97   | 490  | 160  | 120  | 17   | 270  | 630  | 0.8  | 270           | 640  | 410  | 260  | 120  | 300  | 56   | 250  | 0.6           | 120   | 460   | 30    | 47           | 1.9    |
| Jul-95     | NS               | NS   | NS   | NS   | NS   | NS   | 110  | 240  | ND           | ND   | 52   | ND   | 460  | 100  | 28   | 4.7  | 380  | 620  | 180  | 140  | 24   | 420  | 810  | 1.1  | 280           | 810  | NS   | NS   | 160  | NS   | NS   | NS   | 270           | NS    | 210   | NS    | 1.8          |        |
| Oct-95     | NS               | NS   | NS   | NS   | NS   | NS   | 390  | 330  | ND           | ND   | 84   | NS   | 920  | 120  | 40   | 11   | 380  | 800  | 220  | 190  | 20   | 410  | 1300 | 1.2  | 270           | 710  | 310  | 280  | 170  | 300  | NS   | 14   | NS            | 350   | 770   | 420   | NS           | 2.6    |
| Apr-96     | 1900             | NS   | 210  | 120  | 74   | 390  | 330  | 250  | ND           | ND   | 85   | 2.2  | 380  | 68   | 45   | 11   | 290  | 640  | 190  | 88   | 7.9  | 250  | 710  | 1.5  | 110           | 540  | 63   | 220  | 140  | 350  | 11   | 45   | ND            | 210   | 410   | 270   | 44           | 0.6    |
| Oct-96     | NS               | NS   | NS   | NS   | NS   | NS   | 240  | 240  | NS           | NS   | 38   | NS   | 320  | 94   | 7    | 14   | NS   | 750  | 180  | 110  | NS   | NS   | 370  | NS   | 39            | 310  | 220  | 190  | 140  | 200  | NS   | 21   | NS            | 92    | 320   | 93    | NS           | 0.8    |
| Apr-97     | 1600             | NS   | 190  | 95   | 78   | 230  | 250  | 200  | ND           | ND   | 46   | 1.9  | 340  | 130  | 14   | 87   | 120  | 430  | 370  | 82   | 21   | 170  | 120  | 1.4  | 80            | 340  | 18   | 220  | 200  | 91   | 32   | 56   | ND            | 200   | 260   | 15    | 18           | 1.4    |
| Oct-97     | 2200             | NS   | 180  | 170  | 75   | 230  | 220  | NS   | ND           | ND   | 50   | 4.4  | 290  | 120  | 22   | 74   | 120  | 640  | 310  | 100  | 20   | 260  | 160  | 1.5  | 120           | 250  | 200  | 190  | 150  | 210  | 52   | 0.7  | ND            | 210   | 310   | 49    | 13           | 1.8    |
| Apr-98     | 1400             | NS   | ND           | NS            | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | NS    | NS    | NS    | 11           | NS     |
| Oct-98     | 910              | NS   | NS   | NS   | 93   | NS   | NS   | 260  | ND           | ND   | 34   | 10   | 190  | 70   | NS   | 39   | NS   | 340  | 95   | 7.2  | NS   | NS   | 67   | 240  | NS            | NS   | NS   | 180  | 1.1  | 0.7  | ND   | 210  | NS            | NS    | 11    | 1.6   |              |        |
| May-99     | NS               | NS   | 190  | 240  | 52   | 210  | 230  | 230  | NS           | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | NS    | NS    | NS    |              |        |
| Oct-99     | 1800             | NS   | 260  | 86   | 280  | 240  | 230  | ND   | NS           | 44   | 15   | 230  | 38   | 16   | 32   | NS   | 810  | 550  | 71   | 100  | 83   | NS   | NS   | 56   | 300           | NS   | 200  | 370  | 150  | 3.2  | 190  | ND   | 220           | 290   | NS    | 6.4   | ND           |        |
| Jan-00     | NS               | NS   | 71   | NS   | NS   | NS   | NS   | NS   | NS           | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | 730  | NS   | NS   | NS   | NS   | NS   | NS            | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | NS    | NS    | NS    | NS           |        |
| Oct-00     | 1100             | 12   | NS   | 280  | 110  | 190  | 210  | 210  | ND           | NS   | 33   | 14   | NS   | 27   | 6.3  | 110  | NS   | 620  | 370  | 52   | 83   | 200  | NS   | NS   | 31            | 170  | NS   | 190  | 360  | 160  | 110  | 4.2  | 3.8           | NS    | 200   | NS    | 6.4          | 1      |
| Oct-01     | 1400             | 12   | NS   | 250  | 100  | 240  | 250  | 250  | ND           | NS   | 25   | 22   | NS   | 26   | 3.1  | 62   | NS   | 680  | 270  | 30   | 140  | 150  | NS   | NS   | 82            | 180  | NS   | 140  | 470  | 160  | 67   | 5.4  | 4.1           | NS    | 300   | NS    | 11           | 1      |
| Oct/Nov-02 | 730              | NS   | NS   | 250  | 110  | 240  | 210  | 270  | ND           | NS   | 43   | 38   | NS   | 33   | 9.4  | 84   | NS   | 910  | 330  | 25   | 140  | 170  | NS   | NS   | 130           | 200  | NS   | 190  | 290  | 58   | 150  | 24   | 5.6           | 120   | 320   | NS    | 8.1          | 0.6    |
| Oct-03     | 13000            | NS   | NS   | 29   | 61   | 210  | 250  | 270  | ND           | NS   | 8.9  | 41   | NS   | 71   | 17   | 2.7  | NS   | 960  | 71   | 49   | 100  | 160  | NS   | NS   | 95            | 220  | NS   | 63   | 250  | 0.6  | 110  | 13   | 3.3           | 180   | 220   | NS    | 1.2          | ND     |
| Oct-04     | 16000            | NS   | NS   | 50   | 8.6  | 1.2  | 230  | 250  | ND           | NS   | 5.1  | 40   | NS   | 130  | 25   | 67   | NS   | 520  | NS   |      |      |      |      |      |               |      |      |      |      |      |      |      |               |       |       |       |              |        |

## APPENDIX A-2

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## HISTORICAL cis-1,2-DICHLOROETHENE CONCENTRATIONS IN GROUNDWATER

Former 901/902 Thompson Place  
Sunnyvale, California

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ )

| Date   | Extraction Wells |      |      |      |      |      |      |      | A-Zone Wells |      |      |      |      |       |      |      |      |      |       |      |       |      |      |      | B1-Zone Wells |      |      |      |      |      |       |      | B2-Zone Wells |       |       |       |       |        | B3-Zone Well |    |
|--------|------------------|------|------|------|------|------|------|------|--------------|------|------|------|------|-------|------|------|------|------|-------|------|-------|------|------|------|---------------|------|------|------|------|------|-------|------|---------------|-------|-------|-------|-------|--------|--------------|----|
|        | DW-1             | DW-2 | DW-3 | DW-4 | DW-5 | DW-6 | DW-7 | DW-8 | 14-S         | 15-S | 16-S | 17-S | 21-S | 22-S  | 23-S | 25-S | 26-S | 27-S | 28-S  | 29-S | 36-S  | 37-S | 38-S | 54-S | 16-D          | 23-D | 25-D | 27-D | 28-D | 29-D | 36-D  | 52-D | 53-D          | 22-DD | 27-DD | 30-DD | 36-DD | 35-DDD |              |    |
| Apr-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | 1            | 1    | 2700 | 1    | 10   | 4200  | 3600 | 10   | 160  | 120  | 700   | 5    | NS    | NS   | NI   | 810  | 4600          | 10   | 10   | 1300 | 5    | NS   | NI    | NI   | 8200          | NS    | 5     | NS    | NI    |        |              |    |
| Jun-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 1    | NS   | 750  | 1520  | 750  | 1    | 37   | 2    | 1400  | 2    | 10    | 10   | NI   | 46   | 6800          | 2    | 9    | 2800 | 1    | NS   | NI    | NI   | 770           | 2     | 170   | NS    | NI    |        |              |    |
| Jul-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 2100 | NS   | NS   | 17000 | 5500 | 28   | 110  | 4    | 4500  | 4    | NS    | NS   | NI   | NS   | 2700          | 14   | 4    | 5100 | 4    | 5    | NI    | NI   | NS            | 4     | NS    | 5     | NI    | NI     |              |    |
| Aug-82 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | NS   | NS   | 3300 | NS    | NS   | NS   | NS   | NS   | NS    | NS   | 55    | 27   | 300  | NI   | NS            | NS   | NS   | NS   | NS   | 52   | NI    | NI   | 1700          | NS    | 110   | 3     | NI    |        |              |    |
| May-83 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 2400 | NS   | NS   | NS    | NS   | NS   | NS   | NS   | NS    | NS   | 70000 | NS   | 1    | 17   | 350           | NI   | 35   | NS   | NS   | NS   | 12000 | NS   | 1             | NI    | NI    | 44    | NS    | NS     | 120          | NI |
| Jul-83 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | NS   | NS   | NS   | NS    | NS   | NS   | NS   | NS   | NS    | NS   | NS    | NS   | NS   | NS   | NS            | NS   | NS   | NS   | NS   | NS   | NS    | NS   | NS            | NS    | NS    | NS    | NS    | NS     | NS           | NI |
| Mar-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | 1    | 1300 | NS   | 210  | 920   | 3300 | 7    | 45   | 12   | 1500  | 9    | 13    | 27   | NS   | 1200 | 5700          | 21   | 8    | 1800 | 14   | 13   | NI    | NI   | 110           | 6     | 38    | 44    | NI    | NI     |              |    |
| Apr-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 2500 | NS   | 140  | 1400  | 4800 | 6    | 43   | 11   | 1100  | 8    | 14    | 21   | 210  | NI   | 870           | 3400 | 16   | 9    | 1100 | 13   | 10    | NI   | NI            | 82    | 1     | 10    | NS    | NI     |              |    |
| May-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 4100 | NS   | 106  | 1800  | 3900 | 6    | 38   | 14   | 1800  | 8    | 10    | 22   | 200  | NI   | 660           | 4800 | NS   | 45   | 1100 | 18   | 13    | NI   | NI            | NS    | 10    | 9     | 31    | NI     | NI           |    |
| Jun-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 5200 | NS   | 80   | 2090  | 1070 | 4    | 26   | 6    | 1420  | 10   | 10    | 12   | 180  | NI   | 540           | 1610 | 10   | 6    | 1470 | 13   | 9     | NI   | NI            | 34    | 1     | 7     | 6     | NI     | NI           |    |
| Jul-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | 1    | 6300 | NS   | 63   | 2630  | 1071 | 5    | 29   | 8    | 960   | 10   | 7     | 1    | 250  | NI   | 63            | 4300 | 14   | 6    | 610  | 1    | 11    | NI   | NI            | NS    | 5     | 3     | 1     | NI     | NI           |    |
| Aug-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | 1            | NS   | 20   | 490  | NS   | 1000  | NS   | 100  | 45   | NS   | 40    | 64   | 70    | NS   | NI   | NS   | NS            | 96   | 47   | NS   | NS   | NS   | NI    | NI   | 390           | 1     | 18    | 45    | NS    | NI     |              |    |
| Sep-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 3100 | NS   | 81   | 2300  | 1200 | 11   | 21   | 19   | 1400  | 12   | 6     | 23   | 190  | NI   | 890           | 2200 | 12   | 8    | 1200 | 16   | 8     | NI   | NI            | 430   | 6     | 4     | 11    | 2      | NI           | NI |
| Oct-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 3800 | NS   | 78   | 2500  | 1100 | 1    | 16   | 16   | 1200  | 8    | 7     | 4    | 190  | NI   | 250           | 4200 | 11   | 8    | 1100 | 11   | 13    | NI   | NI            | 67    | 100   | 8     | 25    | 1      | NI           | NI |
| Nov-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 4500 | 7    | 141  | 2200  | 1800 | 1    | 42   | 56   | 1100  | 6    | 7     | 15   | 270  | NI   | 1600          | 4200 | 15   | 8    | 1100 | 10   | 9     | NI   | NI            | 420   | 8     | 5     | 13    | 1      | NI           | NI |
| Dec-85 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | 1    | 6100 | NS   | 100  | 3500  | 1700 | 1    | 28   | 1    | 1700  | 6    | 10    | 1    | 270  | NI   | 3000          | 9100 | 270  | 37   | 1200 | 14   | 8     | NI   | NI            | 1000  | 3     | 9     | 13    | 1      | NI           | NI |
| Jan-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 5900 | NS   | 80   | 1700  | 1300 | 1    | 22   | 1    | 3900  | 14   | 9     | 14   | 180  | NI   | 4600          | 5700 | 12   | 9    | 1900 | 13   | 10    | NI   | NI            | 1     | 1     | 100   | 14    | NS     | NI           |    |
| Feb-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 2600 | NS   | 78   | 1800  | 1700 | 15   | 15   | 1    | 3900  | 21   | 7     | 11   | 100  | NI   | 4000          | 6000 | 14   | 10   | 3100 | 14   | 12    | NI   | NI            | 530   | 10    | 6     | 16    | 1      | NI           | NI |
| Apr-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | 1    | 9600 | NS   | 40   | 920   | 2000 | 1    | 11   | 1    | 3200  | 19   | 4     | 7    | 140  | NI   | 3100          | 9600 | 7    | 6    | 2400 | 11   | 5     | NI   | NI            | 920   | 2     | 5     | 7     | 8      | NI           | NI |
| Jun-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 6600 | NS   | 6    | 1200  | 2000 | 60   | 15   | 21   | 9200  | 20   | 6     | 20   | 150  | NI   | 1600          | 2200 | 13   | 8    | 8000 | 10   | 9     | NI   | NI            | 610   | 4     | 5     | 20    | 10     | NI           | NI |
| Aug-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 6600 | NS   | 61   | 880   | 1700 | 1    | 16   | 10   | 13000 | 11   | NS    | 15   | 97   | NI   | 590           | 1400 | 10   | 7    | 9700 | 10   | 8     | NI   | NI            | 1100  | 8     | 4     | 16    | 1      | NI           | NI |
| Oct-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 1100 | NS   | 56   | 1300  | 1500 | 410  | 13   | 11   | 6300  | 12   | 6     | 25   | 120  | NI   | 670           | 4100 | 1    | 8    | 7300 | 10   | 7     | NI   | NI            | 660   | 3     | 10    | 30    | 4      | NI           | NI |
| Dec-86 | NS               | NS   | NS   | NI   | NI   | NI   | NI   | NI   | NS           | NS   | 440  | NS   | 870  | 700   | 1400 | 1    | 6    | 5    | 4500  | 9    | 5</   |      |      |      |               |      |      |      |      |      |       |      |               |       |       |       |       |        |              |    |

## APPENDIX A-2

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## HISTORICAL cis-1,2-DICHLOROETHENE CONCENTRATIONS IN GROUNDWATER

Former 901/902 Thompson Place

Sunnyvale, California

Concentrations reported in micrograms per liter (µg/L)

| Date       | Extraction Wells |      |      |      |      |      |      |      | A-Zone Wells |      |      |      |      |       |      |      |      |      |      |      |       |       |      |      | B1-Zone Wells |      |      |      |      |      |      |      | B2-Zone Wells |       |       |       |       |        | B3-Zone Well |    |
|------------|------------------|------|------|------|------|------|------|------|--------------|------|------|------|------|-------|------|------|------|------|------|------|-------|-------|------|------|---------------|------|------|------|------|------|------|------|---------------|-------|-------|-------|-------|--------|--------------|----|
|            | DW-1             | DW-2 | DW-3 | DW-4 | DW-5 | DW-6 | DW-7 | DW-8 | 14-S         | 15-S | 16-S | 17-S | 21-S | 22-S  | 23-S | 25-S | 26-S | 27-S | 28-S | 29-S | 36-S  | 37-S  | 38-S | 54-S | 16-D          | 23-D | 25-D | 27-D | 28-D | 29-D | 36-D | 52-D | 53-D          | 22-DD | 27-DD | 30-DD | 36-DD | 35-DDD |              |    |
| Jan 94     | NS               | NS   | NS   | NS   | NS   | NS   | NS   | 9    | ND           | ND   | 37   | ND   | 606  | 386   | 797  | 13   | 221  | 83   | 605  | 45   | 1     | 7     | NS   | ND   | 538           | 577  | NS   | NS   | 879  | NS   | NS   | NS   | 798           | NS    | 21    | NS    | 1     |        |              |    |
| Apr 94     | NS               | NS   | NS   | NS   | NS   | NS   | 118  | ND   | ND           | 37   | ND   | 518  | 293  | 487   | 24   | 260  | 34   | 222  | 7    | 2    | 8     | NS    | ND   | 352  | 430           | 7    | 4    | 696  | 4    | 2    | 3    | ND   | 1246          | 7     | 22    | 8     | ND    |        |              |    |
| Jul 94     | NS               | NS   | NS   | NS   | NS   | NS   | 115  | ND   | ND           | 67   | 0.9  | 592  | 285  | 637   | 16   | 302  | 46   | 525  | 5    | 0.6  | 13    | 362   | ND   | 378  | 306           | NS   | NS   | 648  | NS   | NS   | NS   | 138  | NS            | 17    | NS    | 1     |       |        |              |    |
| Oct-94     | NS               | NS   | NS   | NS   | NS   | NS   | 72   | 6    | ND           | ND   | 156  | ND   | 780  | 331   | 985  | 7    | 181  | 40   | 786  | 2    | ND    | 6     | 151  | ND   | 510           | 687  | 4    | 2    | 837  | 4    | NS   | ND   | NS            | 156   | 5     | 14    | NS    | 0.6    |              |    |
| Jan-95     | NS               | NS   | NS   | NS   | NS   | NS   | 84   | 5.8  | ND           | ND   | 68   | ND   | 543  | 386   | 515  | ND   | 15   | 25   | 309  | 0.8  | ND    | 25    | 501  | ND   | 278           | 733  | NS   | NS   | 550  | NS   | NS   | NS   | 1948          | NS    | 9.3   | NS    | ND    |        |              |    |
| Apr-95     | NS               | NS   | NS   | NS   | NS   | NS   | 98.7 | 7.1  | ND           | ND   | 149  | ND   | 480  | 264   | 1025 | 29   | 92   | 21   | 577  | 4.7  | ND    | 4.9   | 223  | ND   | 247           | 686  | 8.8  | 3.9  | 640  | 4.3  | 8.6  | 3.6  | 0.7           | 1448  | 13    | 7.7   | 13    | ND     |              |    |
| Jul-95     | NS               | NS   | NS   | NS   | NS   | NS   | 499  | 2.3  | ND           | ND   | 58   | ND   | 514  | 204   | 613  | 8.8  | 152  | 51.1 | 719  | 6.2  | 1.1   | 6     | 222  | ND   | 327           | 633  | NS   | NS   | 709  | NS   | NS   | NS   | 723           | NS    | 77    | NS    | ND    |        |              |    |
| Oct-95     | NS               | NS   | NS   | NS   | NS   | NS   | 84   | ND   | ND           | 150  | ND   | 330  | 410  | 888   | 14   | 87   | 20   | 903  | ND   | ND   | ND    | 140   | ND   | 220  | 460           | ND   | 864  | ND   | NS   | ND   | NS   | 400  | ND            | 92    | NS    | ND    |       |        |              |    |
| Apr-96     | 1638             | NS   | 31   | 770  | 120  | 13   | 147  | 7.2  | ND           | ND   | ND   | 11   | 405  | 172.3 | 693  | 5.2  | 84   | 20   | 644  | 3.2  | ND    | 3.2   | 364  | ND   | ND            | 518  | 2.9  | 2.2  | 556  | 4.1  | 12   | ND   | ND            | 354   | 8     | 79    | 0.6   | ND     |              |    |
| Oct-96     | NS               | NS   | NS   | NS   | NS   | NS   | 54   | ND   | NS           | NS   | 93   | NS   | 170  | 310   | 270  | 3.5  | NS   | ND   | 490  | ND   | NS    | NS    | 550  | NS   | 232           | 440  | 2.9  | ND   | 390  | ND   | NS   | ND   | NS            | 470   | 5.3   | 8.9   | NS    | ND     |              |    |
| Apr-97     | 980              | NS   | 8.6  | 188  | 56   | 11   | 80   | 2.8  | ND           | ND   | 96   | 55   | 391  | 366   | 299  | 4.3  | 47   | 21   | 404  | 16   | 6     | 7.8   | 404  | ND   | 303           | 562  | 9    | 4.8  | 459  | 4.7  | 45   | 1.3  | ND            | 736   | 15    | 11    | 42.7  | ND     |              |    |
| Oct-97     | 1400             | NS   | 17   | 410  | 53   | 14   | 86   | NS   | 1.9          | ND   | 90   | 85   | 286  | 194   | 228  | 5.4  | 49   | 32   | 387  | 5.4  | 21    | 12    | 520  | ND   | 236           | 230  | 5.2  | 4.5  | 371  | 6.9  | 92   | ND   | ND            | 194   | 18    | 20    | 50    | ND     |              |    |
| Apr-98     | 830              | NS   | 2.2          | NS   | NS   | NS   | NS   | NS    | NS   | NS   | 6.6  | NS   | NS   | NS   | NS    | NS    | NS   | NS   | NS            | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | 130   | NS    | NS    | ND    | NS     | 42           | NS |
| Oct-98     | 890              | NS   | NS   | NS   | NS   | 67   | NS   | NS   | 6            | 3.5  | ND   | 34   | 230  | 40    | 180  | NS   | 7    | NS   | 23   | 330  | 10    | 13    | NS   | NS   | NS            | 200  | 160  | NS   | 2.4  | NS   | 4.1  | 2    | ND            | ND    | 320   | 9.2   | NS    | 69     | ND           |    |
| May-99     | NS               | NS   | 8.5  | 220  | 20   | 7    | 86   | 25   | NS           | NS   | NS   | NS   | NS   | NS    | NS   | NS   | NS   | NS   | NS   | NS   | NS    | NS    | NS   | NS   | NS            | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | NS    | NS    | NS    | NS    | NS     | NS           |    |
| Oct-99     | 1505             | NS   | NS   | 230  | 54   | 11   | 91.5 | 22   | ND           | NS   | 66   | 200  | 28   | 260   | 220  | ND   | NS   | 81   | 708  | 7.9  | 167.7 | 147.1 | NS   | NS   | 23            | 220  | NS   | ND   | 575  | ND   | ND   | 4.2  | ND            | 298.5 | 18    | NS    | 97    | ND     |              |    |
| Jan-00     | NS               | NS   | NS   | 73   | NS   | NS   | NS   | NS   | NS           | NS   | NS   | NS   | NS   | NS    | NS   | NS   | NS   | NS   | 57   | NS   | NS    | NS    | NS   | NS   | NS            | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS            | NS    | NS    | NS    | NS    | NS     |              |    |
| Oct-00     | 940              | NS   | NS   | 190  | 140  | 13   | 68   | 20   | 21           | NS   | 79   | 180  | NS   | 170   | 180  | 12   | NS   | 45   | 210  | 6.9  | 100   | 9.7   | NS   | NS   | 160           | 290  | NS   | 3.2  | 400  | 4.9  | 97   | ND   | ND            | NS    | 11    | NS    | 100   | ND     |              |    |
| Oct-01     | 890              | NS   | NS   | 140  | 160  | 13   | 82   | 15   | 96           | NS   | 62   | 180  | NS   | 150   | 150  | 40   | NS   | 62   | 91   | 3.7  | 110   | 2.5   | NS   | NS   | 190           | 270  | NS   | 2.5  | 240  | 2.9  | 48   | ND   | ND            | NS    | 17    | NS    | 110   | ND     |              |    |
| Oct/Nov-02 | 490              | NS   | NS   | 120  | 150  | 22   | 88   | 14   | 120          | NS   | 60   | 170  | NS   | 180   | 170  | 58   | NS   | 72   | 83   | 9.3  | 70    | 3.7   | NS   | NS   | 170           | 220  | NS   | 4.4  | 280  | 1.6  | 90   | 31   | ND            | 690   | 14    | NS    | 130   | ND     |              |    |
| Oct-03     | 13000            | NS   | NS   | 150  | 28   | 26   | 97   | 91   | 160          | NS   | 160  | 140  | NS   | 250   | 210  | 0.6  | NS   | 110  | 85   | 4    | 53    | 2.9   | NS   | NS   | 340           | 150  | NS   | 71   | 91   | 0.7  | 57   | 33   | 4.5           | 300   | 16    | NS    | 29    | ND     |              |    |
| Oct-04     | 14000            | NS   | NS   | 87   | 18   | 2.1  | 100  | 18   | 150          | NS   | 26   | 90   | NS   | 190   | 240  | 37   | NS   | 160  | NS   | 5.3  | 34    | 3.3   | NS   | NS   | 520           | 92   | NS   | 32   | 34   | ND   | 46   | 1.3  | 6.9           | 150   | 8.6   | NS    | 31    | ND     |              |    |
| Oct-05     | 17000            | NS   | 140          | NS   | 27   | 61   | NS   | 180   | 96   | 74   | NS   | 75   | 29   | 1.7  | 22    | 5.2   | NS   | NS   | 140</         |      |      |      |      |      |      |      |               |       |       |       |       |        |              |    |

## APPENDIX A-3

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## HISTORICAL TOTAL VOLATILE ORGANIC COMPOUND CONCENTRATIONS IN GROUNDWATER

Former 901/902 Thompson Place  
Sunnyvale, California

Concentrations reported in micrograms per liter (µg/L)

| Well ID | Extraction Wells |      |      |      |      |      |      |      | A-Zone Wells |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | B1-Zone Wells |      |      |      |      |      |      |      | B2-Zone Wells |       |       |       |       |        | B3-Zone Well |     |
|---------|------------------|------|------|------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|------|------|---------------|-------|-------|-------|-------|--------|--------------|-----|
|         | DW-1             | DW-2 | DW-3 | DW-4 | DW-5 | DW-6 | DW-7 | DW-8 | 14-S         | 15-S | 16-S | 17-S | 21-S | 22-S | 23-S | 25-S | 26-S | 27-S | 28-S | 29-S | 36-S | 37-S | 38-S | 54-S | 16-D          | 23-D | 25-D | 27-D | 28-D | 29-D | 36-D | 52-D | 53-D          | 22-DD | 27-DD | 30-DD | 36-DD | 35-DDD |              |     |
| Jan-91  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | NS           | NS   | 208  | NS   | 122  | NS   | NS   | NS   | NS   | NS   | 1310          | 1920 | 474  | 369  | 348  | 486  | 125  | 462  | NS            | 1010  | 384   | 103   | 40    | 2      |              |     |
| Apr-91  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | ND           | NS   | 235  | NS   | 4    | 1160          | 1515 | 464  | 432  | 405  | 582  | 125  | 197  | 4             | 590   | 399   | 192   | 33    | 1      |              |     |
| Jul-91  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | NS           | NS   | 363  | NS   | 857  | 2090          | 449  | 410  | 2830 | 483  | 129  | 341  | NS   | 987           | 304   | 728   | 48    | 1     |        |              |     |
| Oct-91  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | NS           | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | 6.6  | 1692          | 2600 | 390  | 320  | 1170 | 400  | 143  | 190  | 4.4           | 898   | 250   | 95    | 42    | 0.8    |              |     |
| Jan-92  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | NS           | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS   | 21   | NS   | NS   | NS   | NS   | 1332          | 1290 | 433  | 393  | 820  | 436  | 121  | 211  | NS            | 706   | 290   | 25    | 25    | ND     |              |     |
| Apr-92  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | 1.5          | NS   | 217  | 1.4  | 374  | NS   | NS   | NS   | NS   | NS   | 169  | NS   | 53   | NS   | NS   | ND   | 469           | 1485 | 145  | 262  | 202  | 133  | 123  | 197  | ND            | 441   | 259   | 66    | 25    | 1.2    |              |     |
| Jul-92  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | ND           | NS   | 263  | NS   | 1065 | 841  | 757  | NS   | NS   | NS   | NS   | NS   | 64   | NS   | NS   | 4.5  | 1161          | 1238 | 461  | 411  | 287  | 441  | 149  | 366  | NS            | 1660  | 408   | 274   | 31    | 0.9    |              |     |
| Oct-92  | NS               | NS   | NS   | NS   | NS   | NS   | NI   | NI   | NS           | NS   | 352  | NS   | 255  | NS   | 445  | NS   | NS   | NS   | 330  | NS   | 57   | NS   | NS   | 21   | 301           | 1554 | 125  | 254  | 339  | 415  | 119  | 132  | 4.6           | 8392  | 318   | 177   | 40    | 1.6    |              |     |
| Jan-93  | NS               | NS   | NS   | NS   | NS   | NS   | 850  | 29   | ND           | NS   | NS   | ND   | 1967 | 454  | 584  | NS   | NS   | NS   | 920  | NS   | 64   | NS   | 1089 | ND   | 1275          | 3453 | NS   | NS   | 1124 | NS   | NS   | NS   | NS            | 4069  | NS    | 35    | NS    | ND     |              |     |
| Apr-93  | NS               | NS   | NS   | NS   | NS   | NS   | 536  | 12   | ND           | ND   | 154  | 4    | 2236 | 1932 | 2375 | NS   | 218  | 616  | 751  | 128  | 60   | 767  | 1198 | 4.3  | 1457          | 2577 | 813  | 423  | 2115 | 81   | 94   | 390  | 9.9           | 2806  | 152   | 84    | 49    | 2.9    |              |     |
| Jul-93  | NS               | NS   | NS   | NS   | NS   | NS   | NS   | NS   | NS           | 259  | ND   | 8.2  | 173  | 5.4  | 1667 | 679  | 1996 | 48   | 280  | 737  | 689  | 97   | 74   | 640  | NS            | 4.4  | 1490 | 1949 | NS   | NS   | 2036 | NS   | NS            | NS    | NS    | 2314  | NS    | 115    | NS           | 5.1 |
| Oct-93  | NS               | NS   | NS   | NS   | NS   | NS   | 706  | 171  | 1.2          | ND   | 128  | 4    | 951  | 465  | 815  | NS   | NS   | 439  | 574  | 81   | 69   | 444  | NS   | 4    | 767           | 1789 | 416  | 321  | 599  | 145  | NS   | 112  | NS            | 2089  | 350   | 498   | NS    | 4.7    |              |     |
| Jan-94  | NS               | NS   | NS   | NS   | NS   | NS   | 306  | ND   | ND           | 101  | 6    | 1213 | 480  | 1384 | 20   | 262  | 563  | 936  | 94   | 50   | 291  | NS   | 2.5  | 819  | 1740          | NS   | NS   | 1137 | NS   | NS   | NS   | NS   | 1146          | NS    | 402   | NS    | 3.7   |        |              |     |
| Apr-94  | NS               | NS   | NS   | NS   | NS   | NS   | 548  | 310  | ND           | ND   | 103  | 6    | 1241 | 361  | 923  | 34   | 296  | 419  | 515  | 54   | 45   | 414  | NS   | 7.2  | 622           | 1444 | 404  | 385  | 965  | 424  | 92   | 177  | ND            | 1567  | 450   | 57    | 65    | 2.9    |              |     |
| Jul-94  | NS               | NS   | NS   | NS   | NS   | NS   | 584  | 284  | ND           | ND   | 139  | 5.1  | 1340 | 475  | 1370 | 37   | 368  | 464  | 806  | 147  | 41   | 416  | 1320 | 4    | 721           | 650  | NS   | NS   | 891  | NS   | NS   | NS   | NS            | 420   | NS    | 57    | NS    | 6.5    |              |     |
| Oct-94  | NS               | NS   | NS   | NS   | NS   | NS   | 560  | 378  | ND           | ND   | 299  | 4.7  | 1528 | 518  | 1629 | 61   | 271  | 735  | 1000 | 208  | 23   | 417  | 379  | 4.2  | 764           | 1631 | 385  | 304  | 1196 | 329  | NS   | 8.8  | NS            | 660   | 306   | 75    | NS    | 2.6    |              |     |
| Jan-95  | NS               | NS   | NS   | NS   | NS   | NS   | 476  | 369  | ND           | ND   | 153  | 1.4  | 1093 | 492  | 986  | 8    | 100  | 576  | 517  | 77   | ND   | 323  | 1091 | 302  | 506           | 1238 | NS   | NS   | 935  | NS   | NS   | NS   | NS            | 2106  | NS    | 25    | NS    | ND     |              |     |
| Apr-95  | NS               | NS   | NS   | NS   | NS   | NS   | 550  | 266  | ND           | ND   | 280  | 1.8  | 959  | 429  | 1515 | 38   | 194  | 537  | 848  | 138  | 18   | 280  | 864  | 5    | 586           | 1360 | 458  | 289  | 877  | 330  | 67   | 277  | 1.3           | 1608  | 490   | 42    | 62    | 1.9    |              |     |
| Jul-95  | NS               | NS   | NS   | NS   | NS   | NS   | 681  | 255  | ND           | ND   | 151  | 2.7  | 1155 | 427  | 1032 | 14   | 537  | 730  | 1080 | 163  | 27   | 432  | 1044 | 4.1  | 740           | 1515 | NS   | NS   | 1061 | NS   | NS   | NS   | NS            | 1015  | NS    | 315   | NS    | 1.8    |              |     |
| Oct-95  | NS               | NS   | NS   | NS   | NS   | NS   | 474  | 330  | ND           | ND   | 313  | 5    | 1360 | 628  | 1466 | 26   | 467  | 842  | 1283 | 190  | 22   | 410  | 1440 | 4.2  | 545           | 1212 | 310  | 280  | 1174 | 300  | NS   | 16   | NS            | 750   | 770   | 512   | NS    | 2.6    |              |     |
| Apr-96  | 3578             | NS   | 262  | 1068 | 212  | 411  | 507  | 279  | ND           | ND   | 172  | 15   | 982  | 281  | 911  | 16   | 379  | 681  | 910  | 94   | 7.9  | 256  | 1077 | 3.1  | 177           | 1084 | 68   | 233  | 804  | 375  | 26   | 46   | 0.6           | 575   | 431   | 396   | 65    | 0.6    |              |     |
| Oct-96  | NS               | NS   | NS   | NS   | NS   | NS   | 294  | 246  | NS           | NS   | 154  | NS   | 552  | 455  | 327  | 18   | NS   | 750  | 739  | 110  | NS   | NS   | 920  | NS   | 319           | 750  | 241  | 190  | 563  | 200  | NS   | 21   | NS            | 562   | 333   |       |       |        |              |     |

## **APPENDIX B**

### **Historical ISB Performance Monitoring Results**

## APPENDIX B

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HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID         | Sample Date            | PCE       | TCE               | cDCE      | tDCE      | 1,1-DCE   | VC        | 1,1-DCA   | CB        | 1,2-DCB   | 1,3-DCB   | 1,4-DCB   | Freon 113            | 1,1,1-TCA | CE        | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | TOC |
|-------------------|------------------------|-----------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------|-----------|-----------|----------------|----------------|-----------------|-----|
|                   |                        | EPA 8260B | EPA 8260B         | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B            | EPA 8260B | EPA 8260B |                |                |                 |     |
| 23-S <sup>3</sup> | 12/6/2005              | <0.5      | 37                | 84        | 14        | 1.9       | 31        | 0.5       | <0.5      | 11        | <0.5      | 1.0       | <0.5                 | <0.5      | <1        | --             | --             | --              | --  |
|                   | 2/14/2006              | <1.0      | 38                | 140       | 15        | 2.2       | 11        | <1.0      | <1.0      | 6.4       | <1.0      | <1.0      | <1.0                 | <1.0      | <2.0      | --             | --             | --              | --  |
|                   | 5/2/2006               | <1.0      | 18                | 210       | 15        | 1.9       | 15        | <1.0      | <1.0      | 11        | <1.0      | <1.0      | <1.0                 | <1.0      | <2        | --             | --             | --              | --  |
|                   | 8/2/2006               | <0.5      | 14                | 49        | 18        | 0.7       | 10        | <0.5      | 12        | 6.9       | <0.5      | 0.7       | <0.5                 | <0.5      | <1        | --             | --             | --              | --  |
|                   | 11/7/2006 <sup>4</sup> | <0.5      | 29 J <sup>5</sup> | 67        | 25        | 1.7       | 14        | 0.5       | 16        | 12        | <0.5      | 0.8       | <0.5 UJ <sup>6</sup> | <0.5      | 3         | --             | --             | --              | --  |
|                   | 5/31/2007              | <0.5      | 41                | 71        | 8.7       | 2.2       | 15        | <0.5      | 1.7       | 5.6       | <0.5      | <0.5      | <0.5                 | <0.5      | <1        | 1.500          | <0.025         | 58.000          | 2.6 |
|                   | 8/21/2007              | <0.5      | 50                | 88        | 16        | 2.2       | 40        | 0.6       | 3.9       | 11        | <0.5      | 0.5       | <0.5                 | <0.5      | <1.0      | 4.000          | 0.52           | 59.000          | 2.8 |
|                   | 10/22/2007             | <0.5      | 52                | 60        | 6.0       | 1.8       | 25        | <0.5      | <0.5      | 5.9       | <0.5      | <0.5      | <0.5                 | <0.5      | <1.0      | 3.2            | <0.025         | 980             | 4.4 |
|                   | 2/5/2008               | 0.7       | 34                | 43        | 5.0       | 1.1       | 14        | <0.5      | 0.6       | 4.4       | <0.5      | <0.5      | <0.5                 | <0.5      | 1.6       | 1.90           | 0.028          | 1700            | 5.1 |
|                   | 5/2/2008               | <0.5      | 22                | 180       | 37        | 3.0       | 100       | 0.6       | 4.0       | 8.8       | <0.5      | 0.5       | <0.5                 | <0.5      | 2.8       | 42.000         | 0.120          | 2300.000        | 20  |
|                   | 7/18/2008              | <0.5      | 38                | 71        | 15        | 2.0       | 22        | <0.5      | 0.7       | 5.9       | <0.5      | <0.5      | <0.5                 | <0.5      | 2.4       | 1.800          | <0.025         | 500.000         | 4.9 |
|                   | 10/7/2008              | <0.5      | 29                | 130       | 17        | 1.5       | 23        | <0.5      | 2.1       | 20        | <0.5      | 0.9       | <2.0                 | <0.5      | 3.2       | 0.990          | 0.070          | 1900.000        | 4.3 |
|                   | 2/10/2009              | <0.5      | 18                | 89        | 6.1       | 1.3       | 6.9       | <0.5      | 1.0       | 12        | <0.5      | 0.5       | <2.0                 | <0.5      | <1.0      | 0.250          | <0.025         | 190.000         | 3.5 |
|                   | 5/27/2009              | <1.0      | 9.3               | 130       | 8.3       | 1.5       | 7.9       | <1.0      | <1.0      | 14        | <1.0      | <1.0      | <4.0                 | <1.0      | <2.0      | 0.260          | 0.036          | 270.000         | 2.4 |
|                   | 7/13/2009              | <1.0      | 7.9               | 150       | 9.4       | 1.6       | 13        | <1.0      | <1.0      | 22        | <1.0      | <1.0      | <4.0                 | <1.0      | <2.0      | 0.300          | 0.029          | 420.000         | 2.6 |
|                   | 10/16/2009             | <1.0      | 17                | 200       | 12.0      | 2.0       | 11        | <1.0      | 1.1       | 23        | <1.0      | 1.0       | <4.0                 | <1.0      | <2.0      | 0.590          | 0.052          | 410.000         | 3   |
|                   | 2/19/2010              | <0.5      | 14                | 77        | 4.6       | 0.8       | 2.8       | <0.5      | <0.5      | 8         | <0.5      | <0.5      | <2.0                 | <0.5      | <1.0      | 0.038          | <0.025         | 70.000          | 6.3 |
|                   | 4/23/2010              | <0.5      | 16                | 76        | 4.4       | 0.8       | 1.8       | <0.5      | <0.5      | 6.6       | <0.5      | <0.5      | <2.0                 | <0.5      | <1.0      | 0.051          | <0.025         | 36.000          | 7.4 |
|                   | 7/7/2010               | <1.3      | 32                | 130       | 7.3       | <1.3      | 9.5       | <1.3      | <1.3      | 14        | <1.3      | <1.3      | <5.0                 | <1.3      | <2.5      | 0.180          | <0.025         | 93.000          | 2.3 |
|                   | 10/21/2010             | <1.3      | 9.5               | 350       | 19        | <1.3      | 160       | <1.3      | 1.6       | 18        | <1.3      | <1.3      | <5.0                 | <1.3      | <2.5      | 5.400          | 0.036          | 370.000         | 2.7 |
|                   | 2/1/2011               | 0.7       | 18                | 77        | 5.1       | 0.6       | 3.7       | <0.5      | <0.5      | 7.0       | <0.5      | <0.5      | <2.0                 | <0.5      | <1.0      | 0.070          | <0.025         | 6.300           | 7.1 |
|                   | 4/14/2011              | 0.9       | 20                | 63        | 4.8       | 0.7       | 1.2       | <0.5      | <0.5      | 5.6       | <0.5      | <0.5      | <2.0                 | <0.5      | <1.0      | <0.025         | <0.025         | 3.400           | 6.2 |
|                   | 7/22/2011              | <0.7      | 26                | 110       | 7.8       | 0.8       | 3.4       | <0.7      | <0.7      | 16        | <0.7      | <0.7      | <2.9                 | <0.7      | <1.4      | 0.120          | <0.025         | 29              | 2.7 |
|                   | 10/26/2011             | <1.0      | 19                | 270       | 20.0      | 1.0       | 100       | <1.0      | 1.0       | 18        | <1.0      | <1.0      | <4.0                 | <1.0      | <2.0      | 1.4            | 0.11           | 130             | 2.5 |
|                   | 2/8/2012               | 0.7       | 40                | 86        | 5.1       | 0.9       | <0.50     | <0.50     | <0.50     | 9.4       | <0.50     | 0.50      | <2.0                 | <0.50     | <1.0      | 0.031          | 0.0065 J       | 4.1             | 2.5 |
|                   | 4/19/2012              | 1.1       | 17                | 51        | 5.6       | 0.8       | 6.2       | <0.50     | <0.50     | 7.5       | <0.50     | <0.50     | <2.0                 | <0.50     | <1.0      | 0.10           | 0.0059 J       | 4.4             | 5.5 |
|                   | 7/23/2012              | 0.7       | 24                | 80        | 7         | 0.6       | 6.8       | <0.50     | <0.50     | 9.7       | <0.50     | 0.60      | <2.0                 | <0.50     | <1.0      | 0.11           | 0.0074 J       | 5.9             | 2.1 |
|                   | 10/10/2012             | 0.9 J     | 30 J              | 120 J     | 7.6 J     | <1.0      | 15 J      | <0.50     | 0.5 J     | 20 J      | <0.50     | 0.80 J    | <2.0                 | <0.50     | <1.0      | 0.17           | 0.15           | 25              | 1.9 |
|                   | 3/12/2013              | 1.0       | 31                | 46        | 4.5       | 0.5       | 5.7       | <0.5      | <0.5      | 9.1       | <0.5      | <0.5      | <1.0                 | <0.5      | <1.0      | 0.052          | 0.20           | 410             | 4.1 |
|                   | 6/4/2013               | 0.8       | 34                | 64        | 3.2       | 0.6       | 0.9       | <0.5      | <0.5      | 11        | <0.5      | 0.5       | <2.0                 | <0.5      | <1.0      | 0.011 J        | 0.11           | 63              | 2.5 |
|                   | 8/29/2013              | 1.1       | 38                | 120       | 12        | 1.3       | 6.1       | <0.5      | <0.5      | 17        | <0.5      | 0.7       | <2.0                 | <0.5      | <1.0      | 0.12           | 0.68           | 310             | 2.5 |
|                   | 10/17/2013             | 1.0       | 37                | 130       | 13        | 1.5       | 12        | <0.5      | <0.5      | 20        | <0.5      | 0.8       | <2.0                 | <0.5      | <1.0      | 0.14           | 0.62           | 270             | 2.4 |

APPENDIX B

## HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

## APPENDIX B

## HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

**FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA**

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

## APPENDIX B

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**HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>**

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID             | Sample Date | PCE       | TCE       | cDCE      | tDCE      | 1,1-DCE   | VC        | 1,1-DCA   | CB        | 1,2-DCB   | 1,3-DCB   | 1,4-DCB   | Freon 113 | 1,1,1-TCA | CE        | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | EPA 415.2 (mg/L) |
|-----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------------|------------------|
|                       |             | EPA 8260B |                |                |                 |                  |
| 28-MW (cont'd)        | 2/5/2008    | <0.5      | <0.5      | 16        | 5.2       | <0.5      | 23        | <0.5      | 25        | 5.3       | <0.5      | 1.1       | <0.5      | <0.5      | <1.0      | 19             | 1.4            | 8800            | 77               |
|                       | 5/2/2008    | <0.5      | <0.5      | 59        | 6.7       | 0.6       | 47        | <0.5      | 24        | 4.5       | <0.5      | 1.1       | <0.5      | <0.5      | <1.0      | 38.000         | 7.100          | 15000.000       | 50               |
|                       | 7/18/2008   | <0.5      | <0.5      | 0.6       | 2.3       | <0.5      | 1.2       | <0.5      | 17        | 4.2       | <0.5      | 1         | <0.5      | <0.5      | 2.1       | 25.000         | 9.700          | 18000.000       | 32               |
|                       | 10/7/2008   | <0.5      | 0.7       | 1.9       | 2.7       | <0.5      | 4.3       | <0.5      | 17        | 5.4       | <0.5      | 0.9       | <2.0      | <0.5      | 2.7       | 16.000         | 13.000         | 14000.000       | 21               |
|                       | 2/10/2009   | <0.5      | 1.1       | 28        | 5.9       | <0.5      | 44        | <0.5      | 16        | 7.1       | <0.5      | 0.9       | <2.0      | <0.5      | 3.3       | 11.000         | 12.000         | 7900.000        | 11               |
|                       | 5/27/2009   | <0.5      | 0.8       | 45        | 9.1       | <0.5      | 110       | <0.5      | 15        | 6.6       | <0.5      | 0.9       | <2.0      | <0.5      | 4.9       | 21.000         | 11.000         | 5900.000        | 10               |
|                       | 7/13/2009   | <0.5      | 0.6       | 30        | 8.4       | <0.5      | 95        | <0.5      | 14        | 8.0       | <0.5      | 1.0       | <2.0      | <0.5      | 4.4       | 12.000         | 7.800          | 5100.000        | 12               |
|                       | 10/16/2009  | <0.5      | 0.6       | 12        | 4.7       | <0.5      | 43        | <0.5      | 16        | 8.1       | <0.5      | 1.0       | <2.0      | <0.5      | 8.8       | 11.000         | 13.000         | 11000.000       | 12               |
|                       | 2/18/2010   | <0.5      | 0.6       | 22        | 6.7       | <0.5      | 48        | <0.5      | 12        | 7.3       | <0.5      | 1.0       | <2.0      | <0.5      | 4.5       | 7.000          | 4.200          | 4700.000        | 9.8              |
|                       | 4/22/2010   | <0.5      | 0.6       | 22        | 5.1       | <0.5      | 50        | <0.5      | 11        | 7.0       | <0.5      | 0.7       | <2.0      | <0.5      | 4.4       | 6.900          | 3.100          | 3200.000        | 7.8              |
|                       | 7/6/2010    | <0.5      | <0.5      | 18        | 2.4       | <0.5      | 92        | <0.5      | 10        | 7.0       | <0.5      | 0.8       | <2.0      | <0.5      | 3.9       | 8.400          | 1.800          | 2000.000        | 5.8              |
|                       | 10/21/2010  | <0.5      | <0.5      | 10        | 1.0       | <0.5      | 73        | <0.5      | 8.1       | 6.2       | <0.5      | 0.6       | <2.0      | <0.5      | 2.2       | 7.700          | 1.000          | 1300.000        | 5.1              |
|                       | 2/1/2011    | <0.5      | <0.5      | 6.0       | 1.2       | <0.5      | 47        | <0.5      | 7.2       | 7.1       | <0.5      | 0.8       | <2.0      | <0.5      | 2.4       | 3.900          | 1.200          | 1100.000        | 5.5              |
|                       | 4/14/2011   | <0.5      | <0.5      | 5.2       | 0.7       | <0.5      | 39        | <0.5      | 6.1       | 5.7       | <0.5      | 0.6       | <2.0      | <0.5      | 2.2       | 2.200          | 1.100          | 900.000         | 6.2              |
|                       | 7/22/2011   | <0.5      | <0.5      | 3.3       | <0.5      | <0.5      | 40        | <0.5      | 5.8       | 6.1       | <0.5      | 0.6       | <2.0      | <0.5      | <1.0      | 3.2            | 0.55           | 470             | 3.9              |
|                       | 10/26/2011  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | 1.8       | <0.5      | 6.8       | 6.1       | <0.5      | 0.6       | <2.0      | <0.5      | 1.9       | 0.61           | 4.0            | 12000           | 55               |
|                       | 2/8/2012    | <0.50     | <0.50     | 0.7       | <0.50     | <0.50     | 4.8       | <0.50     | 9.4       | 8.3       | <0.50     | 0.70      | <2.0      | <0.50     | <1.0      | 0.69           | 11             | 13000           | 12               |
|                       | 4/20/2012   | <0.50     | <0.50     | 1.0       | 0.70      | <0.50     | 6.6       | <0.50     | 7.8       | 7.5       | <0.50     | 0.70      | <2.0      | <0.50     | <1.0      | 0.42           | 3.5            | 7200            | 7.0              |
|                       | 7/24/2012   | <0.50     | <0.50     | 0.9       | <0.50     | <0.50     | 8.2       | <0.50     | 8.1       | 7.0       | <0.50     | 0.70      | <2.0      | <0.50     | <1.0      | 0.64           | 3.1            | 7200            | 6.7              |
|                       | 10/10/2012  | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | 2.8 J     | <0.50     | 8.5 J     | 7.5 J     | <0.50     | 0.70 J    | <2.0      | <0.50     | 1.2 J     | 0.16           | 2.3            | 4600            | 6.0              |
|                       | 3/12/2013   | <0.5      | <0.5      | 0.5       | <0.5      | <0.5      | 0.7       | <0.5      | 9.8       | 7.5       | <0.5      | 0.7       | <1.0      | <0.5      | <1.0      | 0.30           | 9.2            | 14000           | 18               |
|                       | 6/5/2013    | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | 0.8       | <0.5      | 9.8       | 7.0       | <0.5      | 0.8       | <2.0      | <0.5      | <1.0      | 0.049          | 2.4            | 9800            | 9.0              |
|                       | 8/30/2013   | <0.5      | <0.5      | 1.2       | <0.5      | <0.5      | 4.5       | <0.5      | 6.8       | 4.8       | <0.5      | 0.6       | <2.0      | <0.5      | <1.0      | 0.57           | 2.0            | 4500            | 7.4              |
|                       | 10/17/2013  | <0.5      | <0.5      | 1.7       | <0.5      | <0.5      | 8.6       | <0.5      | 7.2       | 5.2       | <0.5      | 0.6       | <2.0      | <0.5      | <1.0      | 0.66           | 1.4            | 2300            | 5.8              |
| PMW-1-1 <sup>9</sup>  | 12/7/2005   | <50       | 3500      | 8400      | 61        | <50       | 410       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <100      | 5.400          | 3.900          | 11.0            | 0.89             |
|                       | 2/14/2006   | <50       | 3200      | 11000     | 64        | <50       | 410       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <100      | 4.100          | 2.800          | 29.0            | 1.9              |
|                       | 5/3/2006    | <50       | 140       | 8700      | 56        | <50       | 330       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <100      | 4.300          | 2.600          | 680.000         | 13               |
|                       | 11/14/2006  | <2.0      | 3.6       | 540       | 74        | 2.2       | 580       | 2.8       | <2.0      | <2.0      | <2.0      | <2.0      | <2.0      | <2        | <4        | 69.000         | 1.100          | 3100.000        | 7.2              |
|                       | 2/16/2007   | <2.5      | <2.5      | 560       | 88        | <2.5      | 850       | 5.0       | <2.5      | <2.5      | <2.5      | <2.5      | <2.5      | <2.5      | <5        | 29.000         | 0.400          | 580.000         | 5.3              |
| PMW-1-2 <sup>10</sup> | 12/7/2005   | <2.5      | 2.8       | 930       | 53        | <2.5      | 730       | 4.7       | <2.5      | <2.5      | <2.5      | <2.5      | <2.5      | <2.5      | <5        | --             | --             | --              | --               |
|                       | 11/14/2006  | <1.7      | 7.7       | 330       | 27        | <1.7      | 280       | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | <3.3      | 580.000        | 1.400          | 13000.000       | 120              |
|                       | 2/16/2007   | <1.7      | 1.9       | 240       | 34        | <1.7      | 360       | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | <3.3      | 410.000        | 1.800          | 13000.000       | 38               |
| PMW-1-3 <sup>10</sup> | 12/7/2005   | <8.3      | <8.3      | 1200      | 9.9       | <8.3      | 90        | <8.3      | <8.3      | <8.3      | <8.3      | <8.3      | <8.3      | <8.3      | <17       | --             | --             | --              | --               |
|                       | 11/13/2006  | <13       | 16        | 2000      | 20        |           |           |           |           |           |           |           |           |           |           |                |                |                 |                  |

## APPENDIX B

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HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID             | Sample Date | PCE         | TCE       | cDCE      | tDCE      | 1,1-DCE     | VC        | 1,1-DCA     | CB          | 1,2-DCB     | 1,3-DCB     | 1,4-DCB     | Freon 113 | 1,1,1-TCA   | CE        | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | EPA 415.2 (mg/L) |
|-----------------------|-------------|-------------|-----------|-----------|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|----------------|----------------|-----------------|------------------|
|                       |             | EPA 8260B   | EPA 8260B | EPA 8260B | EPA 8260B | EPA 8260B   | EPA 8260B | EPA 8260B   | EPA 8260B   | EPA 8260B   | EPA 8260B   | EPA 8260B   | EPA 8260B | EPA 8260B   | EPA 8260B |                |                |                 |                  |
| PMW-2-1<br>(cont'd)   | 5/2/2008    | <42         | 66        | 5500      | 51        | <42         | 2400      | <42         | <42         | <42         | <42         | <42         | <42       | <42         | <83       | 320.000        | 1.800          | 8200.000        | 2.5              |
|                       | 7/18/2008   | <42         | 72        | 6300      | 55        | <42         | 2300      | <42         | <42         | <42         | <42         | <42         | <42       | <42         | <83       | 360.000        | 2.500          | 12000.000       | 2                |
|                       | 10/7/2008   | <42         | 58        | 4900      | <42       | <42         | 1700      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 340.000        | 2.700          | 14000.000       | 2.3              |
|                       | 2/10/2009   | <42         | 68        | 4800      | 46        | <42         | 1500      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 280.000        | 2.700          | 13000.000       | 1.3              |
|                       | 6/1/2009    | <42         | 58        | 4500      | <42       | <42         | 1500      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 260.000        | 2.600          | 12000.000       | 1.8              |
|                       | 7/13/2009   | <42         | 71        | 5500      | 74        | <42         | 1700      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 190.000        | 1.600          | 11000.000       | 1.8              |
|                       | 10/16/2009  | <42         | 75        | 5600      | 49        | <42         | 1500      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 270.000        | 2.700          | 14000.000       | 1.9              |
|                       | 2/18/2010   | <42         | 61        | 5600      | 76        | <42         | 1800      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 270.000        | 2.900          | 16000.000       | 2                |
|                       | 4/23/2010   | <42         | 75        | 6500      | 47        | <42         | 1600      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 260.000        | 2.500          | 14000.000       | 1.6              |
|                       | 7/6/2010    | <42         | 69        | 6100      | 54        | <42         | 2000      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 260.000        | 2.700          | 14000.000       | 1.4              |
|                       | 10/21/2010  | <42         | 79        | 6800      | 54        | <42         | 1800      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 240.000        | 2.500          | 14000.000       | 1.6              |
|                       | 2/1/2011    | <42         | 70        | 6800      | 47        | <42         | 1700      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 220.000        | 2.200          | 12000.000       | 1.9              |
|                       | 4/14/2011   | <42         | 83        | 7300      | 62        | <42         | 1800      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 200.000        | 1.900          | 11000.000       | 1.6              |
|                       | 7/22/2011   | <42         | 66        | 5600      | 43        | <42         | 1500      | <42         | <42         | <42         | <42         | <42         | <170      | <42         | <83       | 230            | 2.1            | 11000           | 1.7              |
|                       | 10/26/2011  | <36         | 67        | 5600      | 85        | <36         | 1500      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 220            | 2.4            | 11000           | 1.6              |
|                       | 2/9/2012    | <36         | 61        | 6500      | <36       | <36         | 1400      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 320            | 24             | 12000           | 1.5              |
|                       | 4/19/2012   | <36         | 51        | 5700      | 63        | <36         | 1600      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 360            | 17             | 12000           | 2.2              |
|                       | 7/23/2012   | <36         | 60        | 5500      | 140       | <36         | 1600      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 360            | 21             | 10000           | 1.5              |
|                       | 10/11/2012  | <50         | 72        | 7100      | 55        | <50         | 1900      | <50         | <50         | <50         | <50         | <50         | <200      | <50         | <100      | 310            | 16             | 9400            | 1.6              |
|                       | 3/12/2013   | <42         | 51        | 4400      | <42       | <42         | 1600      | <42         | <42         | <42         | <42         | <42         | <83       | <42         | <83       | 380            | 21             | 12000           | 2.4              |
|                       | 6/4/2013    | <36         | 57        | 5600      | 46        | <36         | 1600      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 380            | 23             | 14000           | 2.3              |
|                       | 8/29/2013   | <36         | 60        | 5000      | <36       | <36         | 1400      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 360            | 24             | 13000           | 2.1              |
|                       | 10/17/2013  | <36         | 57        | 6500      | 51        | <36         | 2100      | <36         | <36         | <36         | <36         | <36         | <140      | <36         | <71       | 370            | 24             | 13000           | 2.3              |
| PMW-2-2 <sup>10</sup> | 12/7/2005   | <20         | <20       | 2100      | <20       | <20         | 310       | <20         | <20         | <20         | <20         | <20         | <20       | <20         | <40       | --             | --             | --              | 39               |
|                       | 11/14/2006  | <2.0        | <2.0      | 160       | <2.0      | <2.0        | 730       | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        | <2.0      | <2          | <4        | 100.000        | 0.410          | 95.000          | 29               |
|                       | 2/16/2007   | <5.0        | <5.0      | 830       | 8.3       | <5.0        | 2300      | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | <5.0      | <5          | <10       | 180.000        | 0.850          | 530.000         | 29               |
| PMW-2-3               | 12/7/2005   | <3.1        | 290       | 440       | 7.4       | <3.1        | 24        | <3.1        | <3.1        | <3.1        | <3.1        | <3.1        | 4.8       | <3.1        | <6.3      | 22.000         | 1.300          | 6.000           | 0.66             |
|                       | 2/14/2006   | <3.1        | 320       | 480       | 3.5       | <3.1        | 16        | <3.1        | <3.1        | <3.1        | <3.1        | <3.1        | 11        | <3.1        | <6.3      | 0.065          | 0.190          | 3.000           | 0.78             |
|                       | 5/3/2006    | <2.5        | 300       | 420       | 8.4       | <2.5        | 16        | <2.5        | <2.5        | <2.5        | <2.5        | <2.5        | 5.3       | <2.5        | <5        | 0.300          | 0.086          | 16.000          | 0.57             |
|                       | 8/2/2006    | <1.3        | 260       | 330       | 1.4       | <1.3        | 15        | <1.3        | <1.3        | <1.3        | <1.3        | <1.3        | 5.0       | <1.3        | <2.5      | 0.520 J        | 0.096 J        | 46.000 J        | <0.50            |
|                       | 11/13/2006  | <2.5        | 280       | 360       | 3.6       | <2.5        | 32        | <2.5        | <2.5        | <2.5        | <2.5        | <2.5        | 6.0       | <2.5        | <5        | 1.500          | 0.091          | 44.000          | 0.60             |
|                       | 2/12/2007   | <2.5        | 270       | 400       | 5.8       | <2.5        | 32        | <2.5        | <2.5        | <2.5        | <2.5        | <2.5        | 4.7       | <2.5        | <5        | 1.900          | 0.120          | 49.000          | 0.66             |
|                       | 5/31/2007   | <2.5 / <2.5 | 270 / 270 | 380 / 370 | 3.9 / 3.6 | <2.5 / <2.5 | 40 / 30   | <2.5 / <2.5 | <2.5 / <2.5 | <2.5 / <2.5 | <2.5 / <2.5 | <2.5 / <2.5 | 5.6 / 6.4 | <2.5 / <2.5 | <5 / <5   | 3.100          | 0.066          | 63.000          | 0.53             |
|                       | 8/21/2007   | &           |           |           |           |             |           |             |             |             |             |             |           |             |           |                |                |                 |                  |

## APPENDIX B

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**HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>**

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID           | Sample Date             | PCE<br>EPA 8260B | TCE<br>EPA 8260B | cDCE<br>EPA 8260B | tDCE<br>EPA 8260B | 1,1-DCE<br>EPA 8260B | VC<br>EPA 8260B | 1,1-DCA<br>EPA 8260B | CB<br>EPA 8260B | 1,2-DCB<br>EPA 8260B | 1,3-DCB<br>EPA 8260B | 1,4-DCB<br>EPA 8260B | Freon 113<br>EPA 8260B | 1,1,1-TCA<br>EPA 8260B | CE<br>EPA 8260B | Ethene<br>AM20GAX | Ethane<br>AM20GAX | Methane<br>AM20GAX | TOC<br>EPA 415.2 (mg/L) |     |
|---------------------|-------------------------|------------------|------------------|-------------------|-------------------|----------------------|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|------------------------|------------------------|-----------------|-------------------|-------------------|--------------------|-------------------------|-----|
| PMW-2-3<br>(cont'd) | 7/6/2010                | <1.7             | 270              | 200               | 2.0               | <1.7                 | 22              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 3.200             | 0.036             | 24.000             | 0.85                    |     |
|                     | 10/21/2010              | <1.7             | 260              | 220               | 5.8               | <1.7                 | 21              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 3.100             | 0.031             | 17.000             | 0.51                    |     |
|                     | 2/2/2011                | <1.7             | 250              | 180               | 4.3               | <1.7                 | 14              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 2.100             | <0.025            | 13.000             | 0.58                    |     |
|                     | 4/14/2011               | <1.7             | 250              | 240               | 6.6               | <1.7                 | 33              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 5.500             | <0.025            | 28.000             | 0.65                    |     |
|                     | 7/22/2011               | <1.7             | 210              | 170               | 4.5               | <1.7                 | 19              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 3.7               | 0.044             | 19                 | 0.77                    |     |
|                     | 10/26/2011              | <1.7             | 200              | 180               | 2.8               | <1.7                 | 40              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 2.5               | 0.070             | 22                 | 0.53                    |     |
|                     | 2/9/2012                | <1.7             | 260              | 180               | 3.7               | <1.7                 | 15              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 2.7               | 0.033             | 15                 | <0.50                   |     |
|                     | 4/19/2012               | <1.7             | 210              | 170               | 6.4               | 1.7                  | 38              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 7.0               | 0.055             | 44                 | <0.50                   |     |
|                     | 7/23/2012               | <1.3             | 220              | 160               | 3.9               | <1.3                 | 43              | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | 7.3                    | <1.3                   | <2.5            | 9.3               | 0.083             | 81                 | 0.52                    |     |
|                     | 10/11/2012              | <1.7             | 220              | 150               | 4.3               | <1.7                 | 28              | <1.7                 | <1.7            | <1.7                 | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 6.0               | 0.082             | 56                 | 0.59                    |     |
|                     | 3/12/2013               | <0.7             | 240              | 110               | 2.7               | 1.5                  | 17              | <0.7                 | <0.7            | <0.7                 | <0.7                 | <0.7                 | 4.3                    | <0.7                   | <1.4            | 2.2               | 0.044             | 16                 | 0.84                    |     |
|                     | 6/4/2013                | <1.3             | 240              | 120               | 1.8               | <1.3                 | 14              | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | <5.0                   | <1.3                   | <2.5            | 6.4               | 0.060             | 29                 | 0.62                    |     |
|                     | 8/29/2013               | <1.3             | 210              | 110               | 2.0               | <1.3                 | 9.6             | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | <5.0                   | <1.3                   | <2.5            | 1.8               | 0.042             | 13                 | 0.69                    |     |
| DW-2 <sup>11</sup>  | 10/17/2013              | 1.3              | 230              | 120               | 2.4               | <1.3                 | 18              | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | <5.0                   | <1.3                   | <2.5            | 2.5               | 0.059             | 21                 | 0.78                    |     |
|                     | 2/14/2006               | <0.7             | 3.0              | 110               | 0.8               | <0.7                 | <0.7            | <0.7                 | <0.7            | 2.5                  | <0.7                 | <0.7                 | <0.7                   | <0.7                   | <1.4            | 0.560             | 0.260             | 1300.000           | 160                     |     |
|                     | 5/3/2006                | <0.7             | 5.9              | 2.8               | <0.7              | <0.7                 | <0.7            | <0.7                 | <0.7            | 1.0                  | <0.7                 | <0.7                 | <0.7                   | <0.7                   | <1.4            | 0.460             | 0.130             | 1200.000           | 1700                    |     |
|                     | 2/21/2007               | <0.5             | 1.4              | 3.7               | <0.5              | <0.5                 | <0.5            | <0.5                 | <0.5            | 0.6                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1                | 0.510             | 0.066              | 20000.000               | 72  |
|                     | 5/31/2007               | <0.5             | 2.3              | 5.5               | <0.5              | <0.5                 | 0.7             | <0.5                 | <0.5            | 0.9                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1                | 0.210             | 0.450              | 19000.000               | 350 |
|                     | 7/21/2008               | <2.5             | <2.5             | <2.5              | <2.5              | <2.5                 | <2.5            | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <2.5                   | <2.5            | <5.0              | 2.000             | 0.028              | 6300.000                | 35  |
|                     | 10/7/2008               | <0.5             | 0.6              | <0.5              | <0.5              | <0.5                 | 1               | <0.5                 | <0.5            | 0.6                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.240             | <0.025             | 5800.000                | 48  |
|                     | 2/11/2009               | <0.5             | <0.5             | <0.5              | <0.5              | <0.5                 | 0.6             | <0.5                 | <0.5            | 0.7                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.200             | 0.120              | 5900.000                | 30  |
|                     | 5/27/2009               | <0.5             | 0.5              | 0.6               | <0.5              | <0.5                 | <0.5            | <0.5                 | <0.5            | 0.6                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.240             | 0.810              | 13000.000               | 27  |
|                     | 7/13/2009               | <0.5             | <0.5             | 0.7               | <0.5              | <0.5                 | <0.5            | <0.5                 | <0.5            | 0.6                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.052             | 0.560              | 11000.000               | 22  |
|                     | 10/16/2009              | <0.5             | <0.5             | 1.1               | <0.5              | <0.5                 | 1.1             | <0.5                 | <0.5            | 1.0                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.220             | 2.300              | 14000.000               | 24  |
|                     | 2/19/2010               | <0.5             | <0.5             | 0.6               | <0.5              | <0.5                 | 0.7             | <0.5                 | <0.5            | 0.5                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.054             | 1.500              | 7400.000                | 17  |
|                     | 4/23/2010 <sup>12</sup> | <0.5             | 0.6              | 0.8               | <0.5              | <0.5                 | 0.9             | <0.5                 | <0.5            | 0.6                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.120             | 1.900              | 7100.000                | 21  |
|                     | 7/7/2010                | <0.5             | 0.6              | 0.9               | 0.7               | <0.5                 | 0.5             | <0.5                 | <0.5            | 1.0                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.065             | 4.700              | 8700.000                | 25  |
|                     | 10/21/2010              | <0.5             | 0.5              | 1.1               | 0.9               | <0.5                 | <0.5            | <0.5                 | <0.5            | 0.7                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.098             | 0.490              | 860.000                 | 23  |
|                     | 2/2/2011                | <0.5             | <0.5             | 0.6               | 0.9               | <0.5                 | <0.5            | <0.5                 | <0.5            | 0.8                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.042             | 0.620              | 1000.000                | 15  |
|                     | 4/15/2011               | <0.5             | <0.5             | 0.7               | 2.1               | <0.5                 | <0.5            | <0.5                 | <0.5            | 0.7                  | 1.1                  | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | <0.025            | 0.860              | 610.000                 | 11  |
|                     | 7/22/2011               | <0.5             | 0.5              | 0.9               | 5.9               | <0.5                 | 0.9             | <0.5                 | 2.0             | 3.2                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.13              | 8.4                | 2500                    | 9.4 |
|                     | 10/26/2011              | <0.5             | 1.3              | 0.7               | 1.9               | <0.5                 | <0.5            | <0.5                 | 0.9             | 1.8                  | <0.5                 | <0.5                 | <0.5                   | <0.5                   | <0.5            | <1.0              | 0.22              | 0.64               | 3500                    | 630 |
|                     | 2/9/2012                | <0.50            | <0.50            | 0.90              | <0.50             | <0.50                | <0.50           | <0.50                | <0.50           | 0.5                  | 1.4                  | <0                   |                        |                        |                 |                   |                   |                    |                         |     |

## APPENDIX B

## HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,</sup>

**FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA**

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID                      | Sample Date | PCE<br>EPA 8260B | TCE<br>EPA 8260B | cDCE<br>EPA 8260B | tDCE<br>EPA 8260B | 1,1-DCE<br>EPA 8260B | VC<br>EPA 8260B | 1,1-DCA<br>EPA 8260B | CB<br>EPA 8260B | 1,2-DCB<br>EPA 8260B | 1,3-DCB<br>EPA 8260B | 1,4-DCB<br>EPA 8260B | Freon 113<br>EPA 8260B | 1,1,1-TCA<br>EPA 8260B | CE<br>EPA 8260B | Ethene<br>AM20GAX | Ethane<br>AM20GAX | Methane<br>AM20GAX | TOC<br>EPA 415.2<br>(mg/L) |      |
|--------------------------------|-------------|------------------|------------------|-------------------|-------------------|----------------------|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|------------------------|------------------------|-----------------|-------------------|-------------------|--------------------|----------------------------|------|
| X2B1 <sup>13</sup><br>(cont'd) | 8/2/2006    | <6.3             | 350              | 980               | 11                | <6.3                 | 71              | <6.3                 | <6.3            | <6.3                 | <6.3                 | <6.3                 | <6.3                   | <6.3                   | <13             | --                | --                | 1.1                |                            |      |
|                                | 9/18/2006   | <6.3             | 540              | 1400              | 19                | <6.3                 | 130             | <6.3                 | <6.3            | <6.3                 | <6.3                 | <6.3                 | <6.3                   | <6.3                   | <13             | 3.700             | 0.310             | 340.000            | 0.75                       |      |
|                                | 10/18/2006  | <10              | 480              | 1600              | 21                | <10                  | 130             | <10                  | <10             | <10                  | <10                  | <10                  | <10                    | <20                    | <10             | <20               | --                | --                 | 1.0                        |      |
|                                | 11/14/2006  | <6.3             | 510              | 1300              | 20                | <6.3                 | 140             | <6.3                 | <6.3            | <6.3                 | <6.3                 | <6.3                 | <6.3                   | <6.3                   | <13             | 6.400             | 0.200             | 490.000            | 0.89                       |      |
|                                | 12/11/2006  | <20              | 450              | 1900              | 21                | <20                  | 190             | <20                  | <20             | <20                  | <20                  | <20                  | <200                   | <20                    | <40             | 13.000            | 0.180             | 1200.000           | 3.2                        |      |
|                                | 5/31/2007   | <2.5             | 8.5              | 670               | 14                | <2.5                 | 560             | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <2.5                   | <5              | 230.000           | 0.410             | 1500.000           | 5.4                        |      |
|                                | 8/21/2007   | <3.1             | 3.9              | 190               | 5.8               | <3.1                 | 250             | <3.1                 | <3.1            | <3.1                 | <3.1                 | <3.1                 | <3.1                   | <3.1                   | <6.3            | 120.000           | 0.810             | 330.000            | 4.5                        |      |
|                                | 11/1/2007   | <0.8             | 8.2              | 120               | 5.2               | <0.8                 | 120             | <0.8                 | <0.8            | <0.8                 | <0.8                 | <0.8                 | <0.8                   | <0.8                   | <1.7            | 130.000           | 0.540             | 2400.000           | 600                        |      |
|                                | 2/7/2008    | <3.1             | 240              | 420               | 6.3               | <3.1                 | 63              | <3.1                 | <3.1            | <3.1                 | <3.1                 | <3.1                 | <3.1                   | <3.1                   | <6.3            | 8.8               | 0.12              | 310                | 1.2                        |      |
|                                | 2/28/2008   | <2.5             | 150              | 360               | 9.2               | <2.5                 | 73              | <2.5                 | 5.3             | 7.2                  | <2.5                 | <2.5                 | <2.5                   | <2.5                   | <5.0            | 36.000            | 1.400             | 6000.000           | 20                         |      |
|                                | 3/27/2008   | <2.5             | 330              | 980               | 22                | 4.4                  | 160             | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <7.1                   | <2.5            | <5.0              | 25.000            | 0.310              | 730.000                    | 1.1  |
|                                | 5/2/2008    | <6.3             | 380              | 1100              | 18                | <6.3                 | 140             | <6.3                 | <6.3            | <6.3                 | <6.3                 | <6.3                 | <6.3                   | <6.3                   | <13             | 4.700             | 0.140             | 140.000            | 1.4                        |      |
|                                | 7/18/2008   | <1.3             | 3.8              | 300               | 4.7               | <1.3                 | 160             | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | <1.3                   | 2.4                    | <1.3            | <2.5              | 51.000            | 0.870              | 210.000                    | 0.82 |
|                                | 10/7/2008   | <2.5             | 30               | 360               | 5.6               | <2.5                 | 200             | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <10                    | <2.5            | <5.0              | 44.000            | 0.420              | 68.000                     | 1.5  |
|                                | 2/11/2009   | <2.5             | 22               | 660               | 15                | <2.5                 | 580             | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <10                    | <2.5            | <5.0              | 140.000           | 0.400              | 310.000                    | 1.4  |
|                                | 6/1/2009    | <8.3             | 53               | 990               | 17                | <8.3                 | 570             | <8.3                 | <8.3            | <8.3                 | <8.3                 | <8.3                 | <8.3                   | <33                    | <8.3            | <17               | 110.000           | 0.320              | 260.000                    | 1.1  |
|                                | 7/13/2009   | <8.3             | 100              | 1200              | 23                | <8.3                 | 530             | <8.3                 | <8.3            | <8.3                 | <8.3                 | <8.3                 | <8.3                   | <33                    | <8.3            | <17               | 73.000            | 0.260              | 230.000                    | 1.1  |
|                                | 10/16/2009  | <8.3             | 71               | 1100              | 17                | <8.3                 | 510             | <8.3                 | <8.3            | <8.3                 | <8.3                 | <8.3                 | <8.3                   | <33                    | <8.3            | <17               | 73.000            | 0.410              | 280.000                    | 1.2  |
|                                | 2/18/2010   | <8.3             | 57               | 830               | 20                | <8.3                 | 330             | <8.3                 | <8.3            | <8.3                 | <8.3                 | <8.3                 | <8.3                   | <33                    | <8.3            | <17               | 26.000            | 0.200              | 150.000                    | 2.2  |
|                                | 4/23/2010   | 7.7              | 80               | 640               | 9.3               | <5.0                 | 220             | <5.0                 | <5.0            | <5.0                 | <5.0                 | <5.0                 | <5.0                   | <20                    | <5.0            | <10               | 25.000            | 0.170              | 130.000                    | 1.2  |
|                                | 7/6/2010    | <5.0             | 110              | 920               | 14                | <5.0                 | 520             | <5.0                 | <5.0            | <5.0                 | <5.0                 | <5.0                 | <5.0                   | <20                    | <5.0            | <10               | 32.000            | 0.220              | 200.000                    | 0.87 |
|                                | 10/21/2010  | <7.1             | 59               | 470               | 13                | <7.1                 | 690             | <7.1                 | <7.1            | <7.1                 | <7.1                 | <7.1                 | <7.1                   | <29                    | <7.1            | <14               | 74.000            | 0.470              | 260.000                    | 1.1  |
|                                | 2/1/2011    | <3.6             | 50               | 370               | 6.7               | <3.6                 | 140             | <3.6                 | <3.6            | <3.6                 | <3.6                 | <3.6                 | <3.6                   | <14                    | <3.6            | <7.1              | 13.000            | 0.180              | 80.000                     | 0.92 |
|                                | 4/14/2011   | <1.3             | 23               | 180               | 5.2               | <1.3                 | 130             | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | <1.3                   | <5.0                   | <1.3            | <2.5              | 12.000            | 0.270              | 34.000                     | 0.96 |
|                                | 7/22/2011   | <5.0             | 150              | 950               | 14                | <5.0                 | 420             | <5.0                 | <5.0            | <5.0                 | <5.0                 | <5.0                 | <5.0                   | <20                    | <5.0            | <10               | 21                | 0.43               | 92                         | 0.96 |
|                                | 10/27/2011  | <2.5             | 140              | 420               | 6.1               | <2.5                 | 130             | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <10                    | <2.5            | <5.0              | 21                | 1.1                | 330                        | 0.65 |
|                                | 11/21/2011  | 0.87             | 470              | 1100              | 10                | 4.2                  | 150             | 0.91                 | <0.5            | 0.78                 | <0.5                 | <0.5                 | <0.5                   | 6.1                    | 1.2             | <1.0              | 13                | 1.8                | 540                        | 0.57 |
|                                | 2/9/2012    | <2.5             | 330              | 1200              | 16.0              | 3.8                  | 160             | <2.5                 | <2.5            | <2.5                 | <2.5                 | <2.5                 | <2.5                   | <10                    | <2.5            | <5.0              | 23                | 3.2                | 1,000                      | 0.55 |
|                                | 4/19/2012   | <5.0             | 100              | 670               | 13                | <5.0                 | 110             | <5.0                 | <5.0            | <5.0                 | <5.0                 | <5.0                 | <5.0                   | <20                    | <5.0            | <10               | 15                | 0.40               | 140                        | 0.64 |
|                                | 7/23/2012   | <5.0             | 68               | 860               | 13                | <5.0                 | 210             | <5.0                 | <5.0            | <5.0                 | <5.0                 | <5.0                 | <5.0                   | <20                    | <5.0            | <10               | 18                | 0.52               | 150                        | 0.72 |
|                                | 10/11/2012  | <1.3             | 23               | 360               | 8.1               | <1.3                 | 170             | <1.3                 | <1.3            | <1.3                 | <1.3                 | <1.3                 | <1.3                   | <5.0                   | <1.3            | <2.5              | 13                | 0.45               | 57                         | 0.7  |
|                                | 12/12/2012  | < 6.3            | 360              | 890               | 8.0               | < 6.3                | 100             | < 6.3                | < 6.3           | < 6.3                | < 6.3                | < 6.3                | < 6.3                  | 12                     | < 6.3           | < 13              | 19                | 1.8                | 600                        | 0.70 |
|                                | 1/28/2013   | < 5.0            | 340              | 890               | 15                | < 5.0                | 95              | < 5.0                | < 5.0           | < 5.0                | < 5.0                | < 5.0                | < 5.0                  | < 5.0                  | < 10            | 15                | 1.5               | 1100               | 0.81                       |      |
|                                | 2/20/2013   | < 6.3            | 320              | 860               | 11                | < 6.3                | 76              | < 6.3                | < 6.3           | < 6.3                | < 6.3                | < 6.3                | < 6.3                  | < 6.3                  | < 13            | 7.2               | 1.5               | 1100               | 0.80                       |      |
|                                | 3/12/2013   | <8.3             | 230              | 860               | 18                | <8.3                 | 100             | <8.3                 | <8.3            | <8.3                 | <8.3                 | <8.3                 | <8.3                   | <33                    | <8.3            | <17               | 6.9               | 4.6                | 2600                       | 1.4  |
|                                | 6/4/2013    | <8.3             | 110              | 1200              | 19                | <8.3                 | 82              | <8.3                 | <8.3            | <8.3                 | <8.3                 | <8.3                 | <8.3                   | <33                    | <8.3            | <17               | 1.6               | 1.1                | 450                        | 1.0  |
|                                | 8/29/2013   | <7.1             | 250              | 1100              | 15                | <7.1                 | 66              | <7.1                 | <7.1            | <7.1                 | <7.1                 | <7.1                 | <7.1                   | <29                    | <7.1            | <14               | 4.1               | 0.64               | 280                        | 2.0  |
|                                | 10/17/2013  | <7.1             | 100              | 1700              | 52                | <7.1                 | 200             | <7.1                 | <7.1            | <7.1                 | <7.1                 | <7.1                 | <7.1                   | <29                    | <7.1            | <14               | 7.4               | 0.87               | 440                        | 1.5  |
| X2A <sup>14</sup>              | 12/12/2005  | 1.6              | 200              | 230               | 13                | 2                    | 62              | 1.1                  | <0.7            | 46.0                 | <0.7                 | 2.9                  | <0.7                   | <0.7                   | <1.4            | --                | --                | --                 | 1.6                        |      |
|                                | 1/13/2006   | <3.1             | 150              | 610               | 45                | <3.1                 | 250             | <3.1                 | <3.1            | 28                   | <3.1                 | <3.1                 | <3.1                   | <3.1                   | <6.3            | --                | --                | --                 | 2.6                        |      |
|                                | 2/10/2006   | <6.3             | 23               | 740               | 69                | <6.3                 | 340             | <6.3                 | <6.3            | 32                   | <6.3                 | <6.3                 | <6.3                   | <6.3                   | <13             | --                | --                | --                 | 3.9                        |      |
|                                | 4/19/2006   | <5.0             | 110              | 840               | 57                | <5.0                 | 350             | <5.0                 | <5.0            | 28                   | <5.0                 | <5.0                 | <5.0                   | <5.0                   | <10             | --                | --                | --                 | 16                         |      |

## APPENDIX B

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HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIAConcentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID       | Sample Date | PCE<br>EPA 8260B | TCE<br>EPA 8260B | cDCE<br>EPA 8260B | tDCE<br>EPA 8260B | 1,1-DCE<br>EPA 8260B | VC<br>EPA 8260B | 1,1-DCA<br>EPA 8260B | CB<br>EPA 8260B | 1,2-DCB<br>EPA 8260B | 1,3-DCB<br>EPA 8260B | 1,4-DCB<br>EPA 8260B | Freon 113<br>EPA 8260B | 1,1,1-TCA<br>EPA 8260B | CE<br>EPA 8260B | Ethene<br>AM20GAX | Ethane<br>AM20GAX | Methane<br>AM20GAX | TOC<br>EPA 415.2 (mg/L) |
|-----------------|-------------|------------------|------------------|-------------------|-------------------|----------------------|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|------------------------|------------------------|-----------------|-------------------|-------------------|--------------------|-------------------------|
| X2A 14 (cont'd) | 5/1/2006    | <5.0             | 190              | 790               | 44                | <5.0                 | 330             | <5.0                 | 20              | <5.0                 | <5.0                 | <5.0                 | <5.0                   | <5.0                   | <10             | --                | --                | --                 | 8.3                     |
|                 | 7/6/2006    | <1.7             | 2.2              | 320               | 52                | <1.7                 | 240             | <1.7                 | 19              | 26                   | <1.7                 | <1.7                 | <1.7                   | <1.7                   | <3.3            | --                | --                | --                 | 49                      |
|                 | 8/2/2006    | <0.5             | 1                | 320               | 58                | 1.1                  | 200             | 1                    | 22              | 35                   | <0.5                 | 0.8                  | <0.5                   | <0.5                   | <1.0            | 150.000 J         | 0.470 J           | 3900 J             | 24                      |
|                 | 11/14/2006  | <0.5             | 1.9              | 6.7               | 9.1               | <0.5                 | 5.8             | <0.5                 | 80              | 17                   | <0.5                 | 2.8                  | <0.5                   | <0.5                   | 3.5             | 54.000            | 0.660             | 13000.000          | 40                      |
|                 | 5/31/2007   | <0.5             | 0.6              | 1.7               | 5.7               | <0.5                 | 1.7             | <0.5                 | 56              | 30                   | <0.5                 | 3.3                  | <0.5                   | <0.5                   | 4.8             | 24.000            | 3.600             | 15000.000          | 14                      |
|                 | 8/21/2007   | <0.5 / <0.5      | 10 / 10          | 18 / 18           | 7.5 / 7.7         | <0.5 / <0.5          | 83 / 74         | 0.5 / 0.5            | 35 / 35         | 19 / 18              | <0.5 / <0.5          | 2.0 / 2.1            | <0.5 / <0.5            | <0.5 / <0.5            | 7.0 J / 4.0 J   | 220.000           | 3.600             | 7100.000           | 8.9                     |
|                 | 11/1/2007   | <0.5 / <0.5      | 0.7 / 0.8        | 40 / 40           | 15 / 14           | <0.5 / <0.5          | 210 / 170       | 0.9 / 0.9            | 35 / 34         | 18 / 20              | <0.5 / <0.5          | 1.0 / 1.0            | <0.5 / <0.5            | <0.5 / <0.5            | 3.6 / 4.8       | 280 / 280         | 3.6 / 3.3         | 9200/8000          | 8.3/8.2                 |
|                 | 2/7/2008    | <0.5             | 2.9              | 36                | 17                | <0.5                 | 96              | <0.5                 | 24              | 21                   | <0.5                 | 2.2                  | <0.5                   | <0.5                   | <1.0            | 51                | 3.3               | 9300               | 23                      |
|                 | 2/28/2008   | <0.5             | 1.6              | 60                | 14                | <0.5                 | 73              | <0.5                 | 20              | 26                   | <0.5                 | 2.3                  | <0.5                   | <0.5                   | 1.3             | 48.000            | 2.000             | 12000.000          | 110                     |
|                 | 3/27/2008   | <0.5             | 0.9              | 110               | 24                | <0.5                 | 140             | <0.5                 | 30              | 22                   | <0.5                 | 1.5                  | <0.5                   | <0.5                   | 2.0             | 54.000            | 1.600             | 10000.000          | 30                      |
|                 | 5/2/2008    | 2.9              | 210              | 960               | 27                | 4.1                  | 150             | <2.5                 | <2.5            | 6.5                  | <2.5                 | <2.5                 | <2.5                   | <2.5                   | <5.0            | 13.000            | 0.380             | 1800.000           | 1.8                     |
|                 | 7/18/2008   | <1.7             | <1.7             | 48                | 14                | <1.7                 | 420             | <1.7                 | 6.6             | 7.9                  | <1.7                 | <1.7                 | <1.7                   | <1.7                   | <3.3            | 340.000           | 1.100             | 5400.000           | 6.8                     |
|                 | 10/7/2008   | <0.5             | <0.5             | 15                | 12                | <0.5                 | 880             | 1.7                  | 14              | 10                   | <0.5                 | <0.5                 | <2.0                   | <0.5                   | 1.1             | 380.000           | 3.700             | 12000.000          | 12                      |
|                 | 2/11/2009   | <1.7             | <1.7             | 5.9               | 4.9               | <1.7                 | 190             | <1.7                 | 10              | 7.3                  | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 190.000           | 5.200             | 7800.000           | 12                      |
|                 | 5/27/2009   | <1.7             | <1.7             | 8.8               | 6.6               | <1.7                 | 250             | <1.7                 | 13              | 7.1                  | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 93.000            | 9.000             | 9500.000           | 8.5                     |
|                 | 7/13/2009   | <1.7             | <1.7             | 4.3               | 5.4               | <1.7                 | 320             | <1.7                 | 15              | 8.4                  | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 79.000            | 8.500             | 10000.000          | 9.1                     |
|                 | 10/16/2009  | <0.5             | <0.5             | 10                | 7.6               | <0.5                 | 360             | 1.0                  | 20              | 13                   | <0.5                 | 0.5                  | <2.0                   | <0.5                   | <1.0            | 83.000            | 11.000            | 12000.000          | 7.9                     |
|                 | 2/18/2010   | <2.5             | <2.5             | 4.0               | 3.4               | <2.5                 | 240             | <2.5                 | 17              | 10                   | <2.5                 | <2.5                 | <10                    | <2.5                   | <5.0            | 39.000            | 10.000            | 7500.000           | 6.9                     |
|                 | 4/22/2010   | <1.7             | <1.7             | 4.7               | 2.6               | <1.7                 | 250             | <1.7                 | 18              | 12                   | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 47.000            | 8.600             | 5700.000           | 5.2                     |
|                 | 7/6/2010    | <1.7             | <1.7             | 6.6               | 2                 | <1.7                 | 580             | <1.7                 | 20              | 13                   | <1.7                 | <1.7                 | <6.7                   | <1.7                   | <3.3            | 71.000            | 8.500             | 5400.000           | 4.4                     |
|                 | 10/21/2010  | <5.0             | <5.0             | 13                | <5.0              | <5.0                 | 850             | <5.0                 | 22              | 13                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 78.000            | 6.300             | 4200.000           | 4.2                     |
|                 | 2/1/2011    | <5.0             | <5.0             | 20                | <5.0              | <5.0                 | 800             | <5.0                 | 23              | 12                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 68.000            | 4.700             | 3200.000           | 3.7                     |
|                 | 4/14/2011   | <5.0             | <5.0             | 43                | <5.0              | <5.0                 | 830             | <5.0                 | 22              | 13                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 59.000            | 4.000             | 2900.000           | 3.9                     |
|                 | 7/22/2011   | <5.0             | <5.0             | 74                | <5.0              | <5.0                 | 820             | <5.0                 | 27              | 16                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 63                | 3.7               | 2900               | 3.9                     |
|                 | 10/26/2011  | <5.0             | <5.0             | 88                | <5.0              | <5.0                 | 830             | <5.0                 | 24              | 13                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 52                | 3.4               | 2400               | 3.5                     |
|                 | 12/20/2011  | <0.5             | <0.5             | 64                | 5.5               | <0.5                 | 96              | <0.5                 | 15              | 14                   | <0.5                 | 1.2                  | <0.5                   | <0.5                   | <1.0            | 7.4               | 1.6               | 4700               | 7.0                     |
|                 | 2/9/2012    | <2.5             | <2.5             | 43                | 3.9               | <2.5                 | 380             | <2.5                 | 17              | 16.0                 | <2.5                 | <2.5                 | <10                    | <2.5                   | <5.0            | 64                | 2.3               | 5400               | 9.4                     |
|                 | 4/19/2012   | <2.5             | <2.5             | 32                | 4                 | <2.5                 | 640             | <2.5                 | 15              | 17                   | <2.5                 | <2.5                 | <10                    | <2.5                   | <5.0            | 69                | 3.1               | 5900               | 11                      |
|                 | 7/23/2012   | <5.0             | <5.0             | 27                | <5.0              | <5.0                 | 670             | <5.0                 | 17              | 15                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 73                | 4.1               | 5600               | 4.7                     |
|                 | 10/11/2012  | <5.0             | <5.0             | 54                | <5.0              | <5.0                 | 790             | <5.0                 | 21              | 23                   | <5.0                 | <5.0                 | <20                    | <5.0                   | <10             | 90                | 4.3               | 4800               | 4.1                     |
|                 | 12/12/2012  | <1.0             | <1.0             | 120               | 6.2               | <1.0                 | 140             | <1.0                 | 14              | 20                   | <1.0                 | <1.0                 | <1.0                   | <1.0                   | <2.0            | 9.0               | 1.4               | 4500               | 6.8                     |
|                 | 1/28/2013   | <1.0             | <1.0             | 91                | 5.8               | <1.0                 | 120             | <1.0                 | 13              | 18                   | <1.0                 | <1.0                 | <1.0                   | <1.0                   | <2.0            | 12                | 2.9               | 8100               | 8.9                     |
|                 | 2/20/2013   | <1.0             | 1.2              | 17                | 1.9               | <1.0                 | 150             | <1.0                 | 10              | 12                   | <1.0                 | <1.0                 | <1.0                   | <1.0                   | <2.0            | 24                | 4                 | 7300               | <0.5                    |
|                 | 3/12/2013   | <0.5             | <0.5             | 2.9               | 0.9               | <0.5                 | 34              | <0.5                 | 16              | 5.7                  | <0.5                 | 0.7                  | <2.0                   | <0.5                   | <1.0            | 31                | 4.2               | 9700               | 170                     |
|                 | 6/4/2013    | <0.5             | <0.5             | 0.7               | <0.5              | <0.5                 | 47              | <0.5                 | 19              | 6                    | <0.5                 | 0.8                  | <2.0                   | <0.5                   | <1.0            | 33                | 2.6               | 10000              | 10                      |
|                 |             |                  |                  |                   |                   |                      |                 |                      |                 |                      |                      |                      |                        |                        |                 |                   |                   |                    |                         |

## APPENDIX B

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HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID       | Sample Date              | PCE       | TCE       | cDCE      | tDCE      | 1,1-DCE   | VC        | 1,1-DCA   | CB        | 1,2-DCB   | 1,3-DCB   | 1,4-DCB   | Freon 113 | 1,1,1-TCA | CE        | Ethene         | Ethane         | Methane         | TOC              |
|-----------------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------------|------------------|
|                 |                          | EPA 8260B | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | EPA 415.2 (mg/L) |
| X1B 13 (cont'd) | 7/6/2006 <sup>15</sup>   | 6.4       | 290       | 860       | 22.0      | 5.8       | 75        | <5.0      | <5.0      | 7.7       | <5.0      | <5.0      | <5.0      | <5.0      | <10       | --             | --             | --              | 0.71             |
|                 | 8/2/2006 <sup>15</sup>   | <7.1      | 240       | 850       | 19.0      | <7.1      | 81        | <7.1      | <7.1      | 7.6       | <7.1      | <7.1      | <7.1      | <7.1      | <14       | --             | --             | --              | 0.67             |
|                 | 9/18/2006                | 7.7       | 270       | 850       | 27        | 7.3       | 94        | <5.0      | <5.0      | 8.5       | <5.0      | <5.0      | <5.0      | <5.0      | <10       | 3.500          | 0.220          | 310.000         | 0.77             |
|                 | 10/18/2006               | 6.2       | 240       | 840       | 30        | 5.3       | 110       | 1.8       | <0.7      | 9.3       | <0.7      | <0.7      | 1.8       | 1.6       | <1.4      | --             | --             | --              | 0.94             |
|                 | 11/14/2006 <sup>15</sup> | <5.0      | 250       | 840       | 28        | 5.5       | 140       | <5.0      | <5.0      | 6.7       | <5.0      | <5.0      | <5.0      | <5.0      | <10       | 21.000         | 0.350          | 12000.000       | 0.93             |
|                 | 12/11/2006               | <7.1      | 270       | 930       | 28        | <7.1      | 120       | <7.1      | <7.1      | 9.4       | <7.1      | <7.1      | <7.1      | <7.1      | <14       | 22.000         | 0.330          | 13000.000       | 1.0              |
|                 | 5/31/2007                | <6.3      | 140       | 1700      | 47        | <6.3      | 350       | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <13       | 35.000         | 0.350          | 12000.000       | 1.3              |
|                 | 8/21/2007                | <5.0      | 17        | 950       | 31        | <5.0      | 200       | <5.0      | <5.0      | 6.5       | <5.0      | <5.0      | <7.1      | <5.0      | <10       | 14.000         | 0.400          | 4000.000        | 1.7              |
|                 | 11/1/2007                | <7.1      | <7.1      | 740       | 36        | <7.1      | 220       | <7.1      | <7.1      | <7.1      | <7.1      | <7.1      | <7.1      | <7.1      | <14       | 20.000         | 0.190          | 2400.000        | 4.0              |
|                 | 2/7/2008                 | <4.2      | 260       | 930       | <4.2      | 6.3       | 110       | <4.2      | <4.2      | 8.0       | <4.2      | <4.2      | <4.2      | <4.2      | <8.3      | 18             | 0.24           | 3800            | 0.77             |
|                 | 2/28/2008                | <5.0      | 180       | 620       | 19        | <5.0      | 58        | <5.0      | <5.0      | 6.1       | <5.0      | <5.0      | <5.0      | <5.0      | <10       | 32.000         | 0.630          | 7900.000        | 2.5              |
|                 | 3/27/2008                | 6.6       | 240       | 860       | 24        | <6.3      | 110       | <6.3      | <6.3      | 12        | <6.3      | <6.3      | <6.3      | <6.3      | <13       | 20.000         | 0.550          | 3800.000        | 1.1              |
|                 | 5/2/2008                 | <7.1      | 250       | 890       | 40        | <7.1      | 93        | <7.1      | <7.1      | 8.0       | <7.1      | <7.1      | <7.1      | <7.1      | <14       | 7.900          | 0.380          | 2200.000        | 1.3              |
|                 | 7/18/2008                | <2.0      | 74        | 450       | 14        | <2.0      | 380       | <2.0      | <2.0      | 6.4       | <2.0      | <2.0      | <2.0      | <2.0      | <4.0      | 19.000         | 0.200          | 1300.000        | 1.6              |
|                 | 10/7/2008                | 1.8       | 100       | 680       | 15        | 2.2       | 240       | 1.8       | <1.3      | 6.4       | <1.3      | <1.3      | <5.0      | <1.3      | <2.5      | 21.000         | 0.280          | 1800.000        | 1.6              |
|                 | 2/10/2009                | <7.1      | 140       | 1000      | 25        | <7.1      | 160       | <7.1      | <7.1      | 7.6       | <7.1      | <7.1      | <7.1      | <7.1      | <14       | 36.000         | 1.200          | 11000.000       | 1.1              |
|                 | 6/1/2009                 | <3.6      | 79        | 570       | 25        | 3.8       | 570       | <3.6      | <3.6      | 5.3       | <3.6      | <3.6      | <14       | <3.6      | <7.1      | 28.000         | 0.870          | 7500.000        | 1.4              |
|                 | 7/13/2009                | <5.0      | 37        | 660       | 20        | <5.0      | 590       | <5.0      | <5.0      | 5.3       | <5.0      | <5.0      | <20       | <5.0      | <10       | 20.000         | 0.510          | 6900.000        | 1.5              |
|                 | 10/16/2009               | <5.0      | 140       | 1300      | 27        | 7.0       | 400       | <5.0      | <5.0      | 7.0       | <5.0      | <5.0      | <20       | <5.0      | <10       | 11.000         | 1.200          | 9600.000        | 1.3              |
|                 | 2/18/2010                | <5.0      | 12        | 510       | 21        | <5.0      | 660       | <5.0      | <5.0      | 5.1       | <5.0      | <5.0      | <20       | <5.0      | <10       | 9.900          | 0.990          | 5600.000        | 1.5              |
|                 | 4/22/2010                | <5.0      | 62        | 1500      | 25        | <5.0      | 340       | <5.0      | <5.0      | 5.3       | <5.0      | <5.0      | <20       | <5.0      | <10       | 7.600          | 1.600          | 4300.000        | 1.5              |
|                 | 7/6/2010                 | <10       | 29        | 1100      | 21        | <10       | 300       | <10       | <10       | <10       | <10       | <10       | <40       | <10       | <20       | 4.000          | 0.790          | 1700.000        | 1.1              |
|                 | 10/21/2010               | <8.3      | 240       | 2400      | 32        | 12        | 49        | <8.3      | <8.3      | <8.3      | <8.3      | <8.3      | <33       | <8.3      | <17       | 0.600          | 1.700          | 4300.000        | 1.3              |
|                 | 2/1/2011                 | <17       | 87        | 1900      | 24        | <17       | 83        | <17       | <17       | <17       | <17       | <17       | <67       | <17       | <33       | 0.510          | 0.520          | 950.000         | 0.96             |
|                 | 4/15/2011                | <10       | 110       | 1300      | 17        | <10       | 28        | <10       | <10       | <10       | <10       | <10       | <40       | <10       | <20       | 0.170          | 0.180          | 320.000         | 0.91             |
|                 | 7/22/2011                | <6.3      | 67        | 940       | 22        | <6.3      | 44        | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <25       | <6.3      | <13       | 0.82           | 0.17           | 360             | 0.89             |
|                 | 10/27/2011               | <6.3      | 200       | 1000      | 23        | <6.3      | 110       | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <25       | <6.3      | <13       | 11             | 5.2            | 1400            | 0.79             |
|                 | 11/21/2011               | 7.4       | 360       | 1700      | 28        | 8.7       | 130       | 2.2       | <0.5      | 11        | <0.5      | <0.5      | 1.7       | 1.1       | <1.0      | 5.5            | 2.3            | 880             | 0.64             |
|                 | 2/9/2012                 | <6.3      | 180       | 780       | 31        | <6.3      | 93        | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <25       | <6.3      | <13       | 7.1            | 1.8            | 1200            | 0.93             |
|                 | 4/20/2012                | <6.3      | 150       | 620       | 35        | <6.3      | 21        | <6.3      | <6.3      | <6.3      | <6.3      | <6.3      | <25       | <6.3      | <13       | 0.20           | 0.56           | 670             | 0.72             |
|                 | 7/23/2012                | <5.0      | 190       | 570       | 16        | <5.0      | 21        | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      | <20       | <5.0      | <10       | 0.15           | 0.47           | 240             | 0.62             |
|                 | 10/11/2012               | <10       | 100       | 940       | 18        | <10       | 64        | <10       | <10       | <10       | <10       | <10       | <40       | <10       | <20       | 0.25           | 0.5            | 210             | 0.61             |
|                 | 12/12/2012               | <7.1      | 260       | 1100      | 16        | <7.1      | 44        | <7.1      | <7.1      | 7.9       | <7.1      | <7.1      | <7.1      | <7.1      | <14       | 5.3            | 2.9            | 1600            | 0.81             |
|                 | 1/28/2013                | <10       | 210       | 950       | 24        | <10       | 30        | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <20       | 3.4            | 3.2            | 2600            | 0.98             |
|                 | 2/20/2013                | <7.1      | 200       | 850       | 27        | <7.1      | 29        | <7.1      | <7.1      | 9.2       | <7.1      | <7.1      | <7.1      | <7.1      | <14       | 0.92           |                |                 |                  |

## APPENDIX B

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HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID          | Sample Date | PCE<br>EPA 8260B | TCE<br>EPA 8260B | cDCE<br>EPA 8260B | tDCE<br>EPA 8260B | 1,1-DCE<br>EPA 8260B | VC<br>EPA 8260B | 1,1-DCA<br>EPA 8260B | CB<br>EPA 8260B | 1,2-DCB<br>EPA 8260B | 1,3-DCB<br>EPA 8260B | 1,4-DCB<br>EPA 8260B | Freon 113<br>EPA 8260B | 1,1,1-TCA<br>EPA 8260B | CE<br>EPA 8260B | Ethene<br>AM20GAX | Ethane<br>AM20GAX | Methane<br>AM20GAX | TOC<br>EPA 415.2<br>(mg/L) |
|--------------------|-------------|------------------|------------------|-------------------|-------------------|----------------------|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|------------------------|------------------------|-----------------|-------------------|-------------------|--------------------|----------------------------|
| 16-S <sup>16</sup> | 12/12/2005  | <0.5             | 6.1              | 29                | 20                | <0.5                 | 37              | 1.3                  | 11              | 32                   | 0.7                  | 3.3                  | <0.5                   | <0.5                   | 2.6             | --                | --                | --                 | 2.3                        |
|                    | 1/13/2006   | 0.6              | 17               | 43                | 15                | <0.5                 | 44              | 0.9                  | 6.7             | 22                   | <0.5                 | 2.2                  | <0.5                   | <0.5                   | 1.5             | --                | --                | --                 | 3.0                        |
|                    | 2/10/2006   | <0.5             | 9.7              | 33                | 21                | <0.5                 | 27              | 0.6                  | 6.3             | 25                   | <0.5                 | 2.6                  | <0.5                   | <0.5                   | 1.7             | --                | --                | --                 | 6.2                        |
|                    | 4/19/2006   | 4.3              | 260              | 840               | 29                | 4.8                  | 120             | 1.7                  | 2.8             | 17                   | <0.5                 | 0.8                  | 2                      | 1.4                    | <1.0            | --                | --                | --                 | 5.4                        |
|                    | 5/1/2006    | <6.3             | 340              | 810               | 27                | <6.3                 | 130             | <6.3                 | <6.3            | 6.5                  | <6.3                 | <6.3                 | <6.3                   | <6.3                   | <13             | --                | --                | --                 | 1.9                        |
|                    | 7/6/2006    | <0.5             | 5.5              | 37                | 27                | <0.5                 | 14              | <0.5                 | 21.0            | 24.0                 | 0.6                  | 3                    | <0.5                   | <0.5                   | 2.1             | --                | --                | --                 | 16                         |
|                    | 8/2/2006    | <0.5             | 2.8              | 30                | 17                | <0.5                 | 15              | <0.5                 | 23.0            | 21.0                 | 0.6                  | 2.9                  | <0.5                   | <0.5                   | 1.5             | --                | --                | --                 | 72                         |
|                    | 11/14/2006  | <0.5             | 1.5              | 32                | 19                | <0.5                 | 13              | <0.5                 | 26              | 13                   | 0.5                  | 2.6                  | <0.5                   | <0.5                   | 3.1             | 18.000            | 0.130             | 11000.000          | 18                         |
|                    | 5/31/2007   | <0.5             | 0.7              | 11                | 28                | <0.5                 | 9.6             | 0.6                  | 24              | 21                   | 0.5                  | 3.0                  | <0.5                   | <0.5                   | 7.4             | 4.500             | 0.240             | 5800.000           | 4.930                      |
|                    | 8/21/2007   | <0.5             | 0.8              | 14                | 31                | <0.5                 | 19              | 0.6                  | 21              | 22                   | 0.6                  | 3.0                  | <0.5                   | <0.5                   | 9.3 J           | 9.900             | 2.100             | 6500.000           | 8.900                      |
|                    | 10/22/2007  | <0.5             | 0.9              | 19                | 27                | <0.5                 | 27              | 0.6                  | 20              | 28                   | 0.5                  | 3.0                  | <0.5                   | <0.5                   | 6.0             | 13.000            | 1.100             | 7300.000           | 18                         |
|                    | 2/7/2008    | <0.5             | 2.9              | 14                | 18                | <0.5                 | 8.8             | <0.5                 | 21              | 32                   | 0.7                  | 3.6                  | <0.5                   | <0.5                   | 7.4             | 5.4               | 1.0               | 8800               | 35                         |
|                    | 2/28/2008   | <0.5             | 1.1              | 13                | 9.8               | <0.5                 | 7.3             | <0.5                 | 20              | 21                   | 0.5                  | 2.8                  | <0.5                   | <0.5                   | 1.4             | 20.000            | 0.440             | 10000.000          | 280                        |
|                    | 3/27/2008   | <0.5             | 1.2              | 13                | 13                | <0.5                 | 11              | <0.5                 | 27              | 15                   | 0.6                  | 2.8                  | <0.5                   | <0.5                   | 1.4             | 19.000            | 0.470             | 13000.000          | 71                         |
|                    | 5/2/2008    | <0.5             | 0.9              | 36                | 12                | <0.5                 | 31              | <0.5                 | 36              | 12                   | 0.5                  | 3.0                  | <0.5                   | <0.5                   | <1.0            | 19.000            | 0.660             | 13000.000          | 57                         |
|                    | 7/21/2008   | <0.5             | <0.5             | 3.6               | 7                 | <0.5                 | 3.6             | <0.5                 | 24              | 5.4                  | <0.5                 | 1.9                  | <0.5                   | <0.5                   | <1.0            | 10.000            | 0.140             | 9900.000           | 38                         |
|                    | 10/7/2008   | <0.5             | <0.5             | 4.2               | 6.3               | <0.5                 | 3.9             | <0.5                 | 34              | 4.8                  | 0.5                  | 2.3                  | <2.0                   | <0.5                   | 1.1             | 13.000            | 0.320             | 12000.000          | 40                         |
|                    | 2/11/2009   | <0.5             | 0.8              | 5.8               | 5.9               | <0.5                 | 5.9             | <0.5                 | 22              | 6.2                  | <0.5                 | 1.9                  | <2.0                   | <0.5                   | 1.8             | 7.000             | 2.200             | 8800.000           | 17                         |
|                    | 5/27/2009   | <0.5             | 1.3              | 11                | 8.8               | <0.5                 | 14              | <0.5                 | 28              | 8.2                  | <0.5                 | 2.3                  | <2.0                   | <0.5                   | 3.9             | 4.400             | 4.500             | 6000.000           | 13                         |
|                    | 7/13/2009   | <0.5             | 1.0              | 14                | 9.3               | <0.5                 | 20              | <0.5                 | 31              | 11                   | 0.6                  | 2.8                  | <2.0                   | <0.5                   | 3.2             | 3.900             | 3.600             | 4500.000           | 12                         |
|                    | 10/16/2009  | <0.5             | 1.0              | 18                | 10                | <0.5                 | 26              | <0.5                 | 24              | 16                   | 0.6                  | 2.9                  | <2.0                   | <0.5                   | 4.1             | 4.400             | 4.600             | 3800.000           | 9.5                        |
|                    | 2/19/2010   | <0.5             | 0.6              | 7.7               | 8.8               | <0.5                 | 27              | <0.5                 | 16              | 13                   | <0.5                 | 2.4                  | <2.0                   | <0.5                   | 3.7             | 3.200             | 4.400             | 3300.000           | 9.2                        |
|                    | 4/23/2010   | <0.5             | <0.5             | 7.3               | 7.2               | <0.5                 | 20              | <0.5                 | 15              | 12                   | <0.5                 | 2.1                  | <2.0                   | <0.5                   | 3.3             | 2.200             | 4.800             | 3000.000           | 7.5                        |
|                    | 7/7/2010    | <0.5             | <0.5             | 7.2               | 4.6               | <0.5                 | 26              | <0.5                 | 31              | 13                   | 0.6                  | 2.9                  | <2.0                   | <0.5                   | 4.9             | 1.800             | 4.000             | 2800.000           | 8.3                        |
|                    | 10/21/2010  | <0.5             | <0.5             | 6.9               | 6.4               | <0.5                 | 21              | <0.5                 | 13              | 13                   | <0.5                 | 2.1                  | <2.0                   | <0.5                   | 2.9             | 2.000             | 2.700             | 1600.000           | 6.4                        |
|                    | 2/2/2011    | <0.5             | <0.5             | 3.6               | 4.1               | <0.5                 | 18              | <0.5                 | 16              | 12                   | <0.5                 | 2.2                  | <2.0                   | <0.5                   | 1.8             | 1.500             | 2.900             | 1400.000           | 6.0                        |
|                    | 4/15/2011   | <0.5             | <0.5             | 3.5               | 5.7               | <0.5                 | 22              | <0.5                 | 11              | 10                   | <0.5                 | 1.7                  | <2.0                   | <0.5                   | 1.6             | 1.200             | 2.800             | 1100.000           | 5.3                        |
|                    | 7/22/2011   | <0.5             | <0.5             | 2.5               | 2.0               | <0.5                 | 11              | <0.5                 | 15              | 9.6                  | <0.5                 | 2.1                  | <2.0                   | <0.5                   | 1.5             | 0.58              | 3.0               | 1400               | 5.5                        |
|                    | 10/27/2011  | <0.5             | <0.5             | 2.0               | 1.5               | <0.5                 | 7.9             | <0.5                 | 11              | 11                   | <0.5                 | 1.8                  | <2.0                   | <0.5                   | 2.2             | 2.5               | 3.3               | 1300               | 5.0                        |
|                    | 2/8/2012    | <0.50            | <0.50            | 2.1               | 1.4               | <0.50                | 5.6             | <0.50                | 12              | 10.0                 | <0.50                | 1.6                  | <2.0                   | <0.50                  | 1.1             | 0.38              | 2.7               | 5700               | 7.1                        |
|                    | 4/20/2012   | <0.50            | <0.50            | 3.8               | 1.9               | <0.50                | 9.5             | <0.50                | 11              | 11                   | <0.50                | 1.9                  | <2.0                   | <0.50                  | <1.0            | 0.66              | 2.5               | 6000               | 6.8                        |
|                    | 7/24/2012   | <0.50            | <0.50            | 3.3               | 1.1               | <0.50                | 17              | <0.50                | 13              | 13                   | <0.50                | 2.3                  | <2.0                   | <0.50                  | <1.0            | 1.2               | 1.6               | 3800               | 5.5                        |
|                    | 10/10/2012  | <0.50            | <0.50            | 3.2               | 0.9               | <0.50                | 20              | <0.50                | 10              | 16.0                 | <0.50                | 2.4                  | <2.0                   | <0.50                  | <1.0            | 1.2               | 1.3               | 1700               | 4.8                        |
|                    | 12/12/2012  | <0.5             | <0.5             | 3.4               | 1.4               | <0.5                 | 10              | <0.5                 | 13              | 16.0                 | 0.6                  | 2.7                  | <0.5                   | <0.5                   | <1.0            | 2                 | 2                 | 6700               | 7.8                        |
|                    | 1/28/2013   | <0.5             | <0.5             | 4.1               | 2.8               | <0.5                 | 9.9             | <0.5                 | 12              | 14.0                 | <1.0                 | 2.4                  | <0.5                   | <0.5                   | <1.0            | 0.81              | 2.4               | 9600               | 11                         |
|                    | 2/20/2013   | <0.5             | <0.5             | 5.4               | 2.6               | <0.5                 | 13              | <0.5                 | 14              | 13.0                 | 0.5                  | 2.3                  | <0.5                   | <0.5                   | <1.0            | 1.8               | 2.1               | 10000              | 35                         |
|                    | 3/12/2013   | <0.5             | <0.5             | 2.9               | 1.3               | <0.5                 | 7.2             | <0.5                 | 16              | 6.1                  | <0.5                 | 1.7                  | <2.0                   | <0.5                   | <1.0            | 2.2</td           |                   |                    |                            |

## APPENDIX B

HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID          | Sample Date              | PCE       | TCE       | cDCE      | tDCE      | 1,1-DCE   | VC        | 1,1-DCA   | CB        | 1,2-DCB   | 1,3-DCB   | 1,4-DCB   | Freon 113           | 1,1,1-TCA | CE        | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | TOC   |
|--------------------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------|-----------|-----------|----------------|----------------|-----------------|-------|
|                    |                          | EPA 8260B           | EPA 8260B | EPA 8260B |                |                |                 |       |
| DW-7 <sup>14</sup> | 12/12/2005               | <1.3      | 300       | 100       | 1.6       | 1.7       | 4.6       | <1.3      | 1.3       | <1.3      | <1.3      | <1.3      | 10                  | <1.3      | <2.5      | --             | --             | --              | <0.50 |
|                    | 1/13/2006                | <2.5      | 350       | 210       | <2.5      | <2.5      | 5         | <2.5      | <2.5      | <2.5      | <2.5      | <2.5      | 15                  | <2.5      | <5.0      | --             | --             | --              | <0.50 |
|                    | 2/10/2006                | <1.7      | 270       | 140       | 2.8       | 2         | 4.1       | <1.7      | 1.9       | <1.7      | <1.7      | <1.7      | 9.9                 | <1.7      | <3.3      | --             | --             | --              | 0.97  |
|                    | 4/19/2006                | <2.0      | 180       | 290       | 3.8       | 2.3       | 3.9       | <2.0      | <2.0      | <2.0      | <2.0      | <2.0      | 4.6                 | <2.0      | <4.0      | --             | --             | --              | 1.7   |
|                    | 5/1/2006                 | <2.0      | 110       | 2000      | 17        | 6.4       | 42        | <2.0      | <2.0      | 4.8       | <2.0      | <2.0      | 3.8                 | <2.0      | <4.0      | --             | --             | --              | 5.4   |
|                    | 7/6/2006                 | <3.6      | 72        | 430       | 6.1       | <3.6      | 230       | <3.6      | <3.6      | <3.6      | <3.6      | <3.6      | <3.6                | <3.6      | <7.1      | --             | --             | --              | 69    |
|                    | 8/2/2006                 | <1.3      | 57        | 180       | 5.9       | 1.3       | 150       | <1.3      | <1.3      | 3.1       | <1.3      | <1.3      | 2.8                 | <1.3      | <2.5      | 170.000 J      | 0.160 J        | 4700.000 J      | 200   |
|                    | 11/14/2006 <sup>17</sup> | <1.7      | 140       | 200       | <1.7      | <1.7      | 6.4       | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | 4.5                 | <1.7      | <3.3      | --             | --             | --              | 0.66  |
|                    | 5/31/2007                | <1.0      | 68        | 210       | 1.5       | 1.1       | 14        | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      | 3.8                 | <1.0      | <2.0      | 2.500          | 0.150          | 66.000          | 0.72  |
|                    | 8/21/2007                | <1.3      | 85        | 210       | 1.9       | <1.3      | 10        | <1.3      | <1.3      | <1.3      | <1.3      | <1.3      | 3.5                 | <1.3      | <2.5      | 2.000          | 0.270          | 160.000         | 0.63  |
|                    | 11/1/2007                | <1.0      | 160       | 97        | <1.0      | <1.0      | 5.3       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      | 5.4                 | <1.0      | <2.0      | 0.940          | 0.110          | 42.000          | <0.50 |
|                    | 2/7/2008                 | <1.7      | 72        | 230       | 1.8       | <1.7      | 22        | <1.7      | <1.7      | <1.7      | <1.7      | <1.7      | 2.8                 | <1.7      | <3.3      | 18             | 0.086          | 350             | 0.57  |
|                    | 2/28/2008                | <1.3      | 130       | 160       | 4.2       | <1.3      | 43        | <1.3      | <1.3      | <1.3      | <1.3      | <1.3      | 2.8 U <sup>19</sup> | <1.3      | <2.5      | 18.000         | 0.082          | 560.000         | 0.76  |
|                    | 3/27/2008                | <1.0      | 140       | 130       | 1.8       | <1.0      | 51        | <1.0      | <1.0      | 1.2       | <1.0      | <1.0      | 2.4                 | <1.0      | <2.0      | 36.000         | 0.720          | 5500.000        | 3.6   |
|                    | 5/2/2008                 | <1.0      | 160       | 160       | 2.5       | <1.0      | 59        | <1.0      | <1.0      | 1.4       | <1.0      | <1.0      | 3.3                 | <1.0      | <2.0      | 6.500          | 0.075          | 570.000         | 2.3   |
|                    | 7/21/2008                | <0.5      | 6.9       | 210       | 2.8       | 0.7       | 62        | 0.9       | <0.5      | 0.6       | <0.5      | <0.5      | 1.5                 | <0.5      | <1.0      | 4.500          | 0.490          | 220.000         | 1.1   |
|                    | 10/7/2008                | <1.3      | 17        | 190       | 2.5       | <1.3      | 70        | <1.3      | <1.3      | <1.3      | <1.3      | <1.3      | <5.0                | <1.3      | <2.5      | 2.900          | 0.450          | 150.000         | 1.1   |
|                    | 2/11/2009                | <1.3      | 14        | 160       | 1.7       | <1.3      | 70        | <1.3      | <1.3      | <1.3      | <1.3      | <1.3      | <5.0                | <1.3      | <2.5      | 2.400          | 0.160          | 270.000         | 0.54  |
|                    | 6/1/2009                 | <0.5      | 5.1       | 100       | 1.7       | <0.5      | 65        | 0.7       | <0.5      | <0.5      | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 0.960          | 0.280          | 53.000          | 0.67  |
|                    | 7/13/2009                | <0.5      | 6.1       | 95        | 1.8       | <0.5      | 87        | 0.6       | <0.5      | <0.5      | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 1.400          | 0.340          | 58.000          | 0.8   |
|                    | 10/16/2009               | <0.5      | 6.0       | 69        | 2.2       | <0.5      | 110       | 0.7       | <0.5      | 0.6       | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 2.700          | 0.610          | 64.000          | 0.79  |
|                    | 2/19/2010                | <0.5      | 3.3       | 44        | 1.1       | <0.5      | 26        | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 0.450          | 0.230          | 6.100           | 0.89  |
|                    | 4/23/2010                | <0.5      | 12.0      | 86        | 1.4       | <0.5      | 28        | 0.6       | <0.5      | <0.5      | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 0.360          | 0.290          | 9.300           | 0.73  |
|                    | 7/7/2010                 | <1.0      | 4.2       | 57        | 1.5       | <1.0      | 110       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      | <4.0                | <1.0      | <2.0      | 1.500          | 0.410          | 14.000          | <0.50 |
|                    | 10/21/2010               | <1.0      | 5.2       | 52        | 2.1       | <1.0      | 140       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      | <4.0                | <1.0      | <2.0      | 2.500          | 0.530          | 12.000          | 0.80  |
|                    | 2/2/2011                 | <0.5      | 3.1       | 32        | 0.9       | <0.5      | 19        | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 0.230          | 0.140          | 3.400           | 0.71  |
|                    | 4/15/2011                | <0.5      | 5.2       | 62        | 1.5       | <0.5      | 41        | 0.7       | <0.5      | <0.5      | <0.5      | <0.5      | <2.0                | <0.5      | <1.0      | 0.370          | 0.200          | 3.800           | 0.77  |
|                    | 7/22/2011                | <1.0      | 2.0       | 32        | 1.6       | <1.0      | 110       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      | <4.0                | <1.0      | <2.0      | 2.0            | 0.38           | 9.2             | 0.82  |
|                    | 10/27/2011               | <1.0      | 2.1       | 36        | 1.7       | <1.0      | 140       | <1.0      | <1.0      | <1.0      | <1.0      | <1.0      | <4.0                | <1.0      | <2.0      | 2.5            | 0.59           | 11              | 0.54  |
|                    | 2/8/2012                 | <0.50     | 2.4       | 46        | 1.1       | <0.50     | 23        | 0.6       | <0.50     | <0.50     | <0.50     | <0.50     | <2.0                | <0.50     | <1.0      | 0.28           | 0.14           | 1.8             | <0.50 |
|                    | 4/20/2012                | <0.50     | 6.5       | 51        | 1.3       | <0.50     | 24        | 0.50      | <0.50     | <0.50     | <0.50     | <0.50     | <2.0                | <0.50     | <1.0      | 0.61           | 0.42           | 4.5             | <0.50 |
|                    | 7/24/2012                | <0.50     | 1.7       | 30        | 1.8       | <0.50     | 110       | 0.80      | <0.50     | <0.50     | <0.50     | <0.50     | <2.0                | <0.50     | <1.0      | 1.5            | 1.0            | 19              | 0.54  |
|                    | 10/10/2012               | <0.50     | 1.6       | 26        | 1.5       | <0.50     | 110       | 0.6       | <0.50     | <0.50     | <0.50     | <0.50     | <2.0                | <0.50     | <1.0      | 2.4            | 0.48           | 6.7             | <0.50 |
|                    | 3/12/2013                | <0.5      | 7.1       | 55        | 1.2       | <0.5      | 21        | 0.5       | <0.5</    |           |           |           |                     |           |           |                |                |                 |       |

## APPENDIX B

HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID          | Sample Date              | PCE       | TCE       | cDCE      | tDCE      | 1,1-DCE   | VC        | 1,1-DCA   | CB        | 1,2-DCB   | 1,3-DCB   | 1,4-DCB   | Freon 113 | 1,1,1-TCA | CE        | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | TOC  |
|--------------------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------------|------|
|                    |                          | EPA 8260B |                |                |                 |      |
| 16-D <sup>16</sup> | 12/12/2005               | <5.0      | 740       | 970       | 17        | 6.7       | 45        | <5.0      | 7.9       | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      | <10       | --             | --             | --              | 1.2  |
|                    | 1/13/2006                | <17       | 3200      | 4000      | <17       | <17       | 100       | <17       | <17       | <17       | <17       | <17       | <17       | <33       | --        | --             | --             | --              | 0.93 |
|                    | 2/10/2006                | <25       | 1800      | 3100      | <25       | <25       | 82        | <25       | <25       | <25       | <25       | <25       | <25       | <50       | --        | --             | --             | --              | 1.0  |
|                    | 4/19/2006                | <6.3      | 340       | 970       | 41        | <6.3      | 91        | <6.3      | 9.6       | <6.3      | <6.3      | <6.3      | <6.3      | <13       | --        | --             | --             | --              | 1.8  |
|                    | 5/1/2006                 | <2.5      | 220       | 390       | 6.8       | 3.1       | 6.9       | <2.5      | <2.5      | <2.5      | <2.5      | <2.5      | 5.6       | <2.5      | <5.0      | --             | --             | --              | 0.78 |
|                    | 7/6/2006                 | <3.6      | 110       | 460       | 4.7       | <3.6      | 80        | <3.6      | <3.6      | <3.6      | <3.6      | <3.6      | <3.6      | <7.1      | --        | --             | --             | --              | 8.4  |
|                    | 9/18/2006                | <0.5      | 0.6       | 12        | 10        | <0.5      | 10        | <0.5      | 2.7       | 4.4       | 1.9       | 0.5       | <0.5      | <0.5      | <1.0      | 250.000        | 0.380          | 19000.000       | 91   |
|                    | 10/18/2006               | <0.5      | 1.5       | 50        | 4.7       | <0.5      | 59        | <0.5      | 0.8       | 2.3       | <0.5      | 0.6       | 0.5       | <0.5      | <1.0      | --             | --             | --              | 2.7  |
|                    | 11/14/2006 <sup>17</sup> | <0.5      | 1.2       | 26        | 8.8       | <0.5      | 30        | 0.7       | 1.5       | 4.8       | <0.5      | 0.6       | <0.5      | <0.5      | <1.0      | --             | --             | --              | 9.7  |
|                    | 5/31/2007                | <0.5      | 1.7       | 140       | 21        | 0.6       | 190       | 2.2       | 3.0       | 8.6       | <0.5      | <0.5      | <0.5      | <0.5      | <1.0      | 76.000         | 0.140          | 6600.000        | 2.4  |
|                    | 8/21/2007                | <0.5      | 1.0       | 3.4       | 5.9       | <0.5      | 6.6       | 1.4       | 0.9       | 4.8       | <0.5      | <0.5      | <2.5      | <0.5      | <5.0      | 54.000         | 0.360          | 5900.000        | 2.2  |
|                    | 10/22/2007               | <0.5      | 1.7       | 20        | 7.2       | <0.5      | 150       | 1.4       | <0.5      | 3.4       | <0.5      | <0.5      | <1.7      | <0.5      | <3.3      | 50.000         | 0.170          | 7700.000        | 1.8  |
|                    | 2/7/2007                 | <0.5      | 3.0       | 18        | 5.2       | <0.5      | 29        | 0.9       | <0.5      | 3.2       | <0.5      | <0.5      | <0.5      | <0.5      | <1.0      | 95.000         | 0.300          | 12000.000       | 75   |
|                    | 2/28/2008                | <0.5      | 1.9       | 34        | 4.3       | 0.6       | 26        | 1         | <0.5      | 2.7       | <0.5      | <0.5      | <0.5      | <0.5      | <1.0      | 17.000         | 0.320          | 8700.000        | 3.7  |
|                    | 3/27/2008                | <0.5      | 2.4       | 48        | 6.3       | <0.5      | 53        | 0.5       | <0.5      | 3.0       | <0.5      | <0.5      | <0.5      | <0.5      | <1.0      | 33.000         | 1.200          | 19000.000       | 10   |
|                    | 5/2/2008                 | <0.5      | 3.3       | 36        | 5.2       | <0.5      | 52        | 0.7       | <0.5      | 2.1       | <0.5      | <0.5      | 0.6       | <0.5      | <1.0      | 17.000         | 0.380          | 8400.000        | 9.6  |
|                    | 7/21/2008                | <0.5      | 1.5       | 2.1       | 4.1       | <0.5      | 1.5       | 1.1       | <0.5      | 1.9       | <0.5      | <0.5      | <0.5      | <0.5      | <1.0      | 0.120          | 0.220          | 3300.000        | 2.4  |
|                    | 10/7/2008                | <0.5      | 1.7       | 2.5       | 4.3       | <0.5      | 4.5       | 1.2       | <0.5      | 2.2       | <0.5      | <0.5      | <2.0      | <0.5      | <1.0      | 0.310          | 0.230          | 2400.000        | 1.8  |
|                    | 2/11/2009                | <0.5      | 1.3       | 71        | 7.1       | <0.5      | 50        | 0.8       | <0.5      | 2.2       | <0.5      | <0.5      | <2.0      | <0.5      | <1.0      | 0.140          | 3.400          | 1500.000        | 1.6  |
|                    | 6/1/2009                 | <1.0      | 1.0       | 160       | 12        | <1.0      | 110       | <1.0      | 4.5       | 7.5       | <1.0      | <1.0      | <4.0      | <1.0      | <2.0      | 18.000         | 0.860          | 7200.000        | 3.5  |
|                    | 7/13/2009                | <1.0      | <1.7      | 190       | 15        | <1.0      | 130       | 1.0       | 6.4       | 8.4       | <1.0      | <1.0      | <4.0      | <1.0      | <2.0      | 13.000         | 0.800          | 6900.000        | 4.1  |
|                    | 10/16/2009               | <1.7      | 7.0       | 240       | 16        | <1.7      | 110       | <1.7      | 9.7       | 9.9       | <1.7      | <1.7      | <6.7      | <1.7      | <3.3      | 13.000         | 1.400          | 7100.000        | 4.2  |
|                    | 2/19/2010                | <1.7      | 2.7       | 230       | 17        | <1.7      | 130       | <1.7      | 8.3       | 7.3       | <1.7      | <1.7      | <6.7      | <1.7      | <3.3      | 9.600          | 1.300          | 5500.000        | 3.6  |
|                    | 4/23/2010                | <1.7      | 2.1       | 240       | 15        | <1.7      | 130       | <1.7      | 6.8       | 8.3       | <1.7      | <1.7      | <6.7      | <1.7      | <3.3      | 11.000         | 1.200          | 5700.000        | 2.9  |
|                    | 7/7/2010                 | <1.7      | 2.6       | 240       | 15        | <1.7      | 210       | <1.7      | 8.8       | 9.9       | <1.7      | <1.7      | <6.7      | <1.7      | <3.3      | 9.500          | 1.300          | 5200.000        | 2.9  |
|                    | 10/21/2010               | <1.7      | <1.7      | 180       | 14        | <1.7      | 180       | <1.7      | 5.2       | 6.6       | <1.7      | <1.7      | <6.7      | <1.7      | <3.3      | 10.000         | 0.780          | 3500.000        | 1.9  |
|                    | 2/2/2011                 | <1.3      | <1.3      | 230       | 13        | <1.3      | 240       | 1.5       | 2.0       | 5.8       | <1.3      | <1.3      | <5.0      | <1.3      | <2.5      | 10.000         | 0.370          | 3800.000        | 1.1  |
|                    | 4/15/2011                | <1.3      | <1.3      | 32        | 7.2       | <1.3      | 210       | 1.5       | <1.3      | 3.8       | <1.3      | <1.3      | <5.0      | <1.3      | <2.5      | 10.000         | 0.250          | 1500.000        | 0.88 |
|                    | 7/22/2011                | <1.3      | <1.3      | 40        | 8.3       | <1.3      | 200       | <1.3      | <1.3      | 3.1       | <1.3      | <1.3      | <5.0      | <1.3      | <2.5      | 13             | 0.39           | 2600            | 0.84 |
|                    | 10/27/2011               | <1.3      | <1.3      | 14        | 5.9       | <1.3      | 130       | <1.3      | <1.3      | 2.5       | <1.3      | <1.3      | <5.0      | <1.3      | <2.5      | 9.1            | 1.2            | 340             | 0.68 |
|                    | 12/20/2011               | <0.5      | 2.0       | 94        | 8.1       | <0.5      | 170       | 0.9       | <0.5      | 1.7       | <0.5      | <0.5      | 1.1       | <0.5      | <1.0      | 46             | 14             | 2400            | 1.2  |
|                    | 2/8/2012                 | <0.50     | <0.50     | 16        | 7.0       | <0.50     | 80        | 1.1       | <0.50     | 2.0       | <0.50     | <0.50     | <2.0      | <0.50     | <1.0      | 31             | 6.6            | 8000            | 6.7  |
|                    | 4/20/2012                | <0.50     | <0.50     | 6.1 J     | 4.3 J     | <0.50     | 70 J      | 0.6 J     | <0.50     | 1.7 J     | <0.50     | <0.50     | <2.0      | <0.50     | <1.0      | 5.5            | 2.8            | 1500            | 0.84 |
|                    | 7/24/2012                | <0.50     | <0.50     | 9.9       | 3.5       | <0.50     | 130       | 0.80      | <0.50     | 1.4       | <0.50     | <0.50     | <2.0      | <0.50     | <1.0      | 9.0            | 2.0            | 1400            | 0.89 |
|                    | 10/10/2012               | <1.3      | <1.3      | 16        | 3.6       | <1.3      | 180       | <1.3      | <1.3      | 1.8       | <1.3      | <1.3      | &lt       |           |           |                |                |                 |      |

## APPENDIX B

## HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

## APPENDIX B

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HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID                          | Sample Date | PCE       | TCE       | cDCE      | tDCE      | 1,1-DCE   | VC        | 1,1-DCA   | CB        | 1,2-DCB   | 1,3-DCB   | 1,4-DCB   | Freon 113 | 1,1,1-TCA | CE        | Ethene AM20GAX | Ethane AM20GAX | Methane AM20GAX | TOC    |
|------------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------------|--------|
|                                    |             | EPA 8260B |                |                |                 |        |
| Midpoint <sup>20</sup><br>(cont'd) | 11/14/2006  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | 1.0       | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <1.0   |
|                                    | 12/11/2006  | <0.5      | <0.5      | 0.8       | <0.5      | <0.5      | 2.3       | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <0.50  |
|                                    | 4/30/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 5/31/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 6/27/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 9/14/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 86     |
|                                    | 10/18/2007  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 120    |
|                                    | 11/20/2007  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 76     |
|                                    | 12/18/2007  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 120    |
|                                    | 3/22/2006   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 24     |
| Effluent <sup>20</sup>             | 7/11/2006   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <10            | --             | --              | 69     |
|                                    | 9/18/2006   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | 0.6       | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 15     |
|                                    | 9/18/2006   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 10/18/2006  | <0.5      | <0.5      | 1.3       | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <0.50  |
|                                    | 11/14/2006  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <0.050 |
|                                    | 12/11/2006  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <0.50  |
|                                    | 4/30/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 5/31/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 6/27/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | --     |
|                                    | 9/14/2007   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 88     |
|                                    | 10/18/2007  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 91     |
|                                    | 11/20/2007  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 65     |
|                                    | 12/18/2007  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 100    |
|                                    | 1/23/2008   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 25     |
|                                    | 2/4/2008    | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 39     |
|                                    | 2/21/2008   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 30     |
|                                    | 2/28/2008   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 62     |
|                                    | 3/17/2008   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 22     |
|                                    | 3/27/2008   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 9.8    |
|                                    | 4/18/2008   | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 26     |
|                                    | 5/2/2008    | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | 9.0    |
|                                    | 11/21/2011  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <0.50  |
|                                    | 12/20/2011  | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <0.5      | <1.0           | --             | --              | <0.50  |

**APPENDIX B****HISTORICAL RESULTS FOR ISB PERFORMANCE MONITORING<sup>1,2</sup>**

FORMER 901 THOMPSON PLACE FACILITY  
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ ), unless otherwise noted

| Sample ID | Sample Date | PCE<br>EPA 8260B | TCE<br>EPA 8260B | cDCE<br>EPA 8260B | tDCE<br>EPA 8260B | 1,1-DCE<br>EPA 8260B | VC<br>EPA 8260B | 1,1-DCA<br>EPA 8260B | CB<br>EPA 8260B | 1,2-DCB<br>EPA 8260B | 1,3-DCB<br>EPA 8260B | 1,4-DCB<br>EPA 8260B | Freon 113<br>EPA 8260B | 1,1,1-TCA<br>EPA 8260B | CE<br>EPA 8260B | Ethene<br>AM20GAX | Ethane<br>AM20GAX | Methane<br>AM20GAX | TOC<br>EPA 415.2 (mg/L) |
|-----------|-------------|------------------|------------------|-------------------|-------------------|----------------------|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|------------------------|------------------------|-----------------|-------------------|-------------------|--------------------|-------------------------|
|-----------|-------------|------------------|------------------|-------------------|-------------------|----------------------|-----------------|----------------------|-----------------|----------------------|----------------------|----------------------|------------------------|------------------------|-----------------|-------------------|-------------------|--------------------|-------------------------|

**Notes:**

1. Samples were collected by AMEC Geomatrix or Field Solutions, Inc., of San Jose, California, and submitted to Curtis and Tompkins, Ltd., of Berkeley, California, for VOC and TOC analyses. Ethene, ethane, and methane were analyzed by
2. Baseline sampling was conducted on 6 and 7 December 2005.
3. 23-S was not accessible to sample during the February 2007 sampling event.
4. Well was sampled on 7 November 2006 as part of the annual groundwater monitoring event for the site. See the Annual Groundwater Monitoring Report (Geomatrix, 2007).
5. J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
6. UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of the quantitation necessary to accurately and precisely
7. Well P2A was decommissioned in August 2007.
8. DW-1 was converted to an injection well on 22 May 2006 and 25 January 2008, and to an extraction well on 30 March 2007.
9. Well PMW-1-1 was not sampled during the August 2006 quarterly sampling event due to low recharge.
10. Monitoring well sampling discontinued due to low recharge during the baseline sampling event; however, adequate sample volumes were available during the November 2006 and February 2007 quarterly sampling events.
11. Well DW-2 was converted to an injection well on 22 May 2006. Injection was discontinued on 30 August 2007, was resumed on 25 January 2008, and was discontinued on 2 May 2008.
12. The sample bottles for analysis of ethene, ethane, and methane were broken during shipping but the samples bottles for VOC analysis were okay. DW-2 was re-sampled on 28 April 2010 for analysis of ethene, ethane, and methane.
13. Groundwater extraction at wells X1B and X2B1 was discontinued on 11 December 2006, was resumed on 25 January 2008, and was discontinued on 2 May 2008.
14. Groundwater extraction at wells X2A and DW-7 was discontinued on 3 August 2006, was resumed on 25 January 2008, and was discontinued on 2 May 2008.
15. Sample ID is "X1B1" on laboratory report.
16. Groundwater extraction at wells DW-8, 16-S, and 16-D was discontinued on 1 May, 10 August, and 18 October 2006, respectively. Extraction at wells 16-S and 16-D was resumed on 25 January 2008, and was discontinued on 2 May 2008.
17. Samples for ethene, ethane, and methane were not analyzed due to field oversight.
18. U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
19. DW-1 is the only extraction well in operation during the period from 11 April 2007 to 23 January 2008 and, therefore, analytical results for influent and DW-1 are the same.
20. The midpoint and effluent ports for the GAC vessel were sampled after replacement of carbon in the lag vessel on 18 September 2006. The lag carbon vessel was disconnected on 31 January 2008, and no samples were taken from

**Abbreviations:**

< = compound not detected above indicated laboratory reporting limit

<0.5 / <0.5 = indicates that duplicate samples were collected

1,1,1-TCA = 1,1,1-trichloroethane

1,1-DCA = 1,1 dichloroethane

1,1-DCE = 1,1-dichloroethene

1,2-DCB = 1,2-dichlorobenzene

1,3-DCB = 1,3-dichlorobenzene

1,4-DCB = 1,4-dichlorobenzene

CB = chlorobenzene

cDCE = cis-1,2-dichloroethene

CE = chloroethane

PCE = tetrachloroethene

TCE = trichloroethene

tDCE = trans-1,2-dichloroethene

TOC = total organic carbon

$\mu\text{g/L}$  = micrograms per liter

VC = vinyl chloride

VOC = volatile organic compound

## **APPENDIX C**

### **Title Search**

**901 Thompson Place**

901 Thompson Place  
Sunnyvale, CA 94085

Inquiry Number: 3752184.1  
October 09, 2013

## EDR Environmental Lien and AUL Search



Environmental Data Resources Inc

440 Wheelers Farms Road  
Milford, CT 06461  
800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

## EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

### ***Thank you for your business.***

Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EDR Environmental Lien and AUL Search

### TARGET PROPERTY INFORMATION

#### ADDRESS

901 Thompson Place  
901 Thompson Place  
Sunnyvale, CA 94085

#### RESEARCH SOURCE

##### **Source 1:**

Santa Clara Recorder  
Santa Clara, CA

### PROPERTY INFORMATION

#### **Deed 1:**

Type of Deed: deed  
Title is vested in: GBP Thompson Place LLC  
Title received from: Westcore Thompson II LLC  
Deed Dated 11/30/2005  
Deed Recorded: 12/1/2005  
Book: NA  
Page: na  
Volume: na  
Instrument: na  
Docket: NA  
Land Record Comments:  
Miscellaneous Comments:  
  
**Legal Description:** See Exhibit  
  
**Legal Current Owner:** GBP Thompson Place LLC  
  
**Parcel # / Property Identifier:** 205-26-018, 205-26-005  
  
**Comments:** See Exhibit

### ENVIRONMENTAL LIEN

Environmental Lien: Found  Not Found

### OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found  Not Found

## **Deed Exhibit 1**

First American Title Company

Escrow No.: 162676

**Recording Requested by and  
When Recorded Mail to,  
and Mail Tax Statements to:**

GBP Thompson Place, L.L.C.  
100 N. Sepulveda Boulevard, Suite 1210  
El Segundo, California 90245  
Attention: Mr. Jack Mahoney

DOCUMENT: 18701638

Pages: 5



|           |            |
|-----------|------------|
| Fees . .  | 29.00      |
| Taxes . . | ++ Conf ++ |
| Copies .  |            |
| AMT PAID  | 29.00      |

BRENDA DAVIS  
SANTA CLARA COUNTY RECORDER  
Recorded at the request of  
First American Title Company

RDE # 012  
12/01/2005  
2:10 PM

APN: 205-26-006, 005 Space Above This Line for Recorder's Use

**GRANT DEED**

The undersigned Grantor declares that Documentary Transfer Tax is not part of the public records.

For valuable consideration, receipt of which is acknowledged, Westcore Thompson II, LLC, a Delaware limited liability company ("Grantor"), hereby grants to GBP Thompson Place, L.L.C., a Delaware limited liability company ("Grantee"), that certain real property located in the City of Sunnyvale, County of Santa Clara, State of California, as legally described in Exhibit A attached hereto and made a part hereof (the "Property") together with all of Grantor's right, title and interest in and to all improvements and structures located thereon and all easements, appurtenances, rights and privileges of Grantor appertaining to the Property.

The Property is conveyed subject to those certain matters of record shown on Exhibit B attached hereto and made a part hereof.

**IN WITNESS WHEREOF**, Grantor has caused its duly authorized representative to execute this instrument as of the date hereinafter written.

||||continued on next page||||

FILER REQUESTS  
DO NOT RECORD STAMP VALUE

205-26-005, 006

\\\\\\continued from previous page\\\\\\

DATED: November30, 2005

**GRANTOR:**

WESTCORE THOMPSON II, LLC,  
a Delaware limited liability company

By: MRB Manager, LLC,  
A Delaware limited liability company  
Its manager

By:



Manish Malhotra,  
Its Vice President

STATE OF California)  
COUNTY OF San Diego) SS.

On Nov. 10, 2005, before me, Kathryn R. Mankin  
Date Name and Title of Office (e.g., "Jane Doe, Notary Public")  
personally appeared Manish Malhotra  
Name(s) of Signer(s),



personally known to me

-or-

proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

Witness my hand and official seal.

Kathryn R. Mankin  
Signature of Notary



**EXHIBIT A**

**LEGAL DESCRIPTION OF THE REAL PROPERTY**

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF SUNNYVALE,  
COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, AS DESCRIBED AS FOLLOWS:

PARCEL ONE:

PARCEL A AS SHOWN ON THAT CERTAIN PARCEL MAP FILED IN THE OFFICE OF  
THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA ON  
AUGUST 17, 1971 IN BOOK 288 OF MAPS, PAGE 36.

APNs: 205-26-006 and 205-26-005

**EXHIBIT B**  
**PERMITTED EXCEPTIONS**

1. General and special taxes and assessments for the fiscal year 2005-2006, a lien not yet due or payable.
2. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code, a lien not yet due or payable.
3. The lien of bonds and assessment liens, if applicable, collected with the general and special taxes, a lien not yet due or payable.
4. An easement shown or dedicated on the map filed or recorded as Book 108, Page 53 of Parcel Map

For: Public utilities, wire clearance, anchor and incidental purposes.

5. An easement for drainage facilities and incidental purposes, recorded July 09, 1969 as Book 8598, Page 649 of Official Records.

In Favor of: The City of Sunnyvale  
Affects: The Northerly 10 feet of Lots 9 through 12

6. An easement for electrical facilities and incidental purposes, recorded July 05, 1974 as Book 0978, Page 296 of Official Records.

In Favor of: Pacific Gas and Electric Company, a California corporation  
Affects: The Easterly 5 feet of the Westerly 20 feet of the Southerly 15 feet

7. The terms and provisions contained in the document entitled "Covenant and Agreement to Restrict Use of Property" recorded January 05, 1993 as Book M573, Page 1893 of Official Records.
8. The terms and provisions contained in the document entitled "Covenant and Agreement to Restrict Use of Property" recorded January 18, 1994 as Book N254, Page 1516 of Official Records.
9. The terms and provisions contained in the document entitled "Covenant To Restrict Use of Property" recorded May 20, 2005 as Document No. 18382725 of Official Records.
10. The terms and provisions contained in the document entitled "Environmental Easement Agreement" recorded May 20, 2005 as Document No. 18382728 of Official Records.

## **MISCELLANEOUS EXHIBITS**



# California Regional Water Quality Control Board

## San Francisco Bay Region



**Terry Tamminen**  
Secretary for  
Environmental  
Protection

1515 Clay Street, Suite 1400, Oakland, California 94612  
(510) 622-2300 • Fax (510) 622-2460  
<http://www.swrcb.ca.gov/rwqcb2>

**Arnold Schwarzenegger**  
Governor

Date: September 9, 2004  
File No: 2189.8105 (DW)  
43-1768 (KER)

Advanced Micro Devices, Inc.  
Attn: Julia Bussey, Mail Stop 5  
P.O. Box 3453  
Sunnyvale, CA 94088

Subject: Authorization to discharge treated groundwater under the requirements of Order No. R2-2004-0055, NPDES Permit No. CAG912003 (VOC)

Facility: Groundwater Treatment System located at 901 Thompson Place, Sunnyvale, Santa Clara County, CA 94086

Dear Ms. Bussey:

Water Board staff has reviewed your application dated January 21, 2004 for the above facility. We have determined that the discharge is eligible under the requirements of Order No. R2-2004-0055, for discharge or reuse of extracted and treated groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds. Authorization to discharge treated groundwater from the above facility is hereby granted providing the following conditions are met:

1. You must comply with all applicable requirements of Order No. R2-2004-0055 and the associated Self-Monitoring Program (SMP). **The effluent shall not contain constituents in excess of the limits listed under the column titled “Discharge to Drinking Water Areas” in the table B.1, on page 6, of the Order.** A copy of Order No. R2-2004-0055 and the SMP are attached. You may also obtain an electronic copy of this Order and the SMP from [http://www.swrcb.ca.gov/rwqcb2/npdes\\_gen\\_permit.htm](http://www.swrcb.ca.gov/rwqcb2/npdes_gen_permit.htm).
2. An air-stripping unit will treat the extracted groundwater. Treated water will be discharged through a storm sewer to Calabazas Creek (Latitude 37 Deg. 23 Min. 20 Sec; Longitude 121 Deg. 59 Min. 12 Sec.)
3. **The maximum discharge from the groundwater treatment system shall not exceed 70 gallons per minute.** The discharge shall not cause pollution, contamination, or nuisance.
4. In order to prevent a scalant problem in the treatment system, you are proposing to use INHIBITOR AZ8104. Your proposal is hereby approved. Please note that sampling should be conducted when highest quantity of the chemical is added to the system. The monitoring data such as inventory of the chemical used, effluent analytical tests for any



Ms. Julia Bussey

- 2 -

September 9, 2004

constituents of concern monitoring results, and inspection reports should be submitted to our office as explained in Order No. R2-2004-0055.

5. Self-Monitoring Reports shall be submitted on a calendar quarter basis, no later than 30 days following the last day of the quarter. These reports should be directed to the responsible staff at this office, Keith Roberson and to Derek Whitworth. Reports should be submitted as a paper copy to Keith Roberson and as an electronic PDF file to Derek Whitworth at the Water Board's FTP site. Details for submitting electronic documents are given in the link "FTP Guide for Dischargers" at <http://www.swrcb.ca.gov/rwqcb2/>. Please note that effective January 1, 2004, monitory penalties will be assessed for submitting late monitoring reports pursuant to Water Code Section 13385.1 (you may review California Assembly Bill 1541 for more information).

This authorization letter shall be effective immediately and expires on July 21, 2009, the expiration date of Order No. R2-2004-0055. If you need to continue discharging after that date, you must file an application as explained in Provision E.20 of the Order not later than January 21, 2009.

Notice is hereby given that it is the responsibility of any person proposing to discharge to a storm drain system or other watercourses to obtain authorization to discharge from the agency having jurisdiction over the use of the storm drain system or watercourse. This discharge authorization is conditional and may be terminated at any time.

Please contact Keith Roberson of my staff at (510) 622-2404 or ker@rb2.swrcb.ca.gov if you have any questions.

Sincerely,



for

Bruce H. Wolfe  
Executive Officer

Digitally signed by Stephen Hill for EO  
DN: CN = Stephen Hill for EO, C =  
US, O = SFBRWQCB, OU = TCD  
Location: Oakland  
Date: 2004.09.10 09:17:26 -07'00'

Attachment:  
Order No. R2-2004-0055

Peter Lin  
AMD Place M/S 5  
Sunnyvale, CA 94088

W/o attachment:  
Suzanne McNulty, Water Board